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National Institute on Drug Abuse

Diagnostic Source Book on Drug Abuse Research and Treatment

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Diagnostic Source Book on Drug Abuse Research and Treatment

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Chapter I

OVERVIEW: RATIONALE AND GUIDELINES FOR USING COMPARABLE MEASURES TO EVALUATE SUBSTANCE ABUSERS

Bruce J. Rounsaville, M.D.

Introduction

This publication has been compiled to assist substance abuse treatment personnel and researchers in attaining comparability in coverage and reporting of clinical and research investigations of substance abusers. To accomplish this, chapters have been written to provide the reader with a relatively brief list of recommended instruments or measures to use in evaluating six areas: (1) demographic characteristics, employment history, and legal history; (2) alcohol and drug use history; (3) medical history and medical consequences of substance abuse; (4) psychiatric diagnosis; (5) family functioning; and (6) social adjustment and social supports.

The publication is intended as a practical guide to help clinicians and investigators choose measurement techniques which are most likely to answer their research questions and to have utility in a given research setting. The reviews are not intended to be exhaustive. Rather, only a limited number of instruments or measures are reviewed in each area since the intent is to encourage use of comparable measures across studies and sites. For each recommended instrument, the reader is given a description of its salient features and some information on how to obtain the most recent version. In most areas, the instruments were chosen from long lists of available measures on the basis of the following criteria: (1) the degree to which reliability has been established; (2) the adequacy of findings regarding validity and psychometric properties of the instrument; (3) the record of use in substance-abusing populations and availability of comparison data with an indication of feasibility of use with these subject groups; and (4) efficiency and ease of administration.

Efforts to use a common language or a standardized set of metrics for the evaluation and treatment of substance abusers is hardly new. The National Institute on Drug Abuse (NIDA) has published, a decade ago, one publication on instruments for use in drug abuse research (Lettieri 1982) and has promulgated comparable coding systems for reporting data from the Drug Abuse Warning Network (DAWN) (NIDA 1983) and the Client Oriented Data Acquisition Process (CODAP) (NIDA 1982). Despite recommendations for use of a set of core variables and measures, there has been and continues to be little uniformity in selection of instruments for use in the drug abuse field (see, e.g., Tims and Holland 1984).

Persistence in the use of heterogeneous measures across studies and sites seems puzzling when the advantages of common measures are considered. The basic process of advancing scientific knowledge through the successive testing of related hypotheses is not possible without common measures. To illustrate: it is difficult to imagine that the advances made in elementary physics over the centuries would have occurred without common measures of such fundamental dimensions as time, distance, or force. In investigations of substance abusers, a major concern is the effectiveness of different treatment approaches. While proponents of different approaches can usually cite findings which suggest the efficacy of their methods and measures, comparing findings across investigations is difficult because of marked differences in the way client characteristics and treatment outcome are defined and measured.

Development of new techniques and removal of ineffective ones are unlikely to take place without use of comparable measures and methods. Use of comparable measures will enable investigators to conduct a series of related studies that systematically evaluate the effectiveness of particular treatment techniques. Comparable measures are essential also to spotting temporal trends. Key factors which cause variability in the substance abuse field over time are changes in the availability of drugs, the populations using drugs, and the rates of use. Noting these changes over time has been possible through four series of NIDA-sponsored surveys which have used identical measures repeatedly: (1) the national high school student surveys (Johnston et al. 1982); (2) the national household surveys of drug abuse (Miller et al. 1983); (3) the CODAP (NIDA 1982); and (4) the DAWN (NIDA 1983).

Given the obvious advantages for use of common measures, why have previous efforts to standardize measures largely been ignored? One argument against using them is that choice of a measure is frequently arbitrary. While it was obvious that a common metric for time or distance was needed in physics, in areas such as psychopathology the phenomena are less understood and so complex that choice of a particular domain or method for measuring them seems premature when there is no evidence to suggest the superiority of one approach over another. Although this argument has some validity, it ignores the fact that the arbitrary adoption of models which approximate the phenomena under study is a necessary step in developing knowledge about their shortcomings. Take, as an example, the American Psychiatric Association's development of the third edition (revised) of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R). While the choice of criteria for disorders in this manual (American Psychiatric Association 1987) was sometimes based on very limited empirical evidence, the promulgation of operationalized criteria for the disorders set in motion a series of investigations which fostered the development of more refined and valid criteria for future diagnostic systems.

A second common argument against the use of standardized criteria across studies is that this may stifle innovation. Creativity and innovativeness in research design are among the valued criteria for reviewing grant proposals and articles submitted for publication. Simply using a standardized instrument or battery of instruments seems to be regarded as requiring no special skill. Moreover, as this argument goes, use of a standardized battery may leave inadequate time or resources for investigating research questions of particular interest.

To meet such objections to the use of common measures, this publication has two features. First, for each area, several instruments are discussed. They range from being comparatively brief to being relatively detailed measures. By selecting a brief instrument, investigators can assess a particular area without making it the major focus of their study. Second, while this publication is not intended to dictate the use of measures inappropriate to an investigator's needs, use of a brief set of core measures is recommended for the purpose of providing a linkage with other studies. The investigator can add to the core battery new or innovative measures to meet the needs of a particular study. Guidelines for using instruments recommended in this publication are discussed next, followed by presentation of some special issues to be considered in studies of substance abusers.

Guidelines for Using Instruments Recommended in This Publication

Minimal Modifications

The development of research instruments is a time-consuming, laborious, and meticulous process that involves numerous stages in which one moves from choice of content areas to determination of the reliability and validity of the final product. The use of a measure that has been developed provides enormous savings of time and effort. However, for many investigators, the resulting product does not seem quite right. Some feel that several items could be better understood if reworded, that several other items are redundant, or that crucial areas of special interest have been ignored entirely! Alternately, in considering an instrument that was intended to be used as a clinician interview, some may perceive the items as straightforward enough to be used as pencil-and-paper measures. The modification is made in the belief that the measure will do quite nicely for a study being planned.

It is precisely this urge to modify instruments that requires caution. Comparison data, reliability statistics, and other psychometric properties for a given instrument are specific to that instrument. Major changes in the way the instrument is used can reduce it from a fully developed and validated tool to a mere collection of items with largely unknown properties. There are exceptions to this principle. Some of these will be discussed below; others can be gathered from the literature on the instrument.

Using a Portion of the Instrument. As noted, one criticism of using a "core battery" of instruments is the difficulty in finding the time or resources to adequately investigate areas in addition to the core. Hence, it is usually desirable to shorten an existing instrument when possible, especially if one is only interested in a particular content area covered by the instrument. For example, an investigator may be interested in evaluating the influence of antisocial personality traits on the outcome of treatment in cocaine abusers. Helzer's chapter in this publication contains methods for assessing this trait. The question here is: how much would findings be compromised if the Antisocial Personality section of the Diagnostic Interview Schedule (DIS) (Robins et al. 1981) and the Psychopathic Deviance (Pd) items from the Minnesota Multiphasic Personality Inventory (MMPI) were administered without using the rest of these instruments? In the case of Antisocial Personality, it is possible to assess this trait without using the entire DIS; the diagnosis is neither dependent on ruling out any other diagnosis nor contingent on first meeting criteria for another diagnosis. However, this would not be the case for some other DIS diagnoses, such as Unipolar Major Depression, which can be made only if Schizophrenia and Bipolar Disorder are ruled out. For the Psychopathic Deviance scale of the MMPI, use of these items apart from the larger instrument would be of questionable validity; it is the constellation of the Pd scale with other items, and with findings from the Lie scale, which allows one to draw inferences about a tested individual's antisocial characteristics.

These examples illustrate that, while use of portions of instruments is sometimes possible, this should be done only with those instruments and those portions of instruments in which the collection and interpretation of findings for that part are not contingent on findings or prior procedures for other parts. In general, it is better to use a briefer, self-contained measure rather than only part of a longer one.

Modification of the Item Pool

When confronted with a collection of items in a standard instrument for a particular area, there are frequently several types of problems. Some items may be difficult for subjects to understand because of ambiguous or archaic wording. Item format may force a choice, for example, between answers of true and false while many subjects may feel their answers are really somewhere in between this dichotomy. Also, while items may cover many important areas, some may leave out aspects of particular interest to the investigator.

Despite these understandable difficulties, the user of this publication is urged to be conservative and to use the entire item pool for a given area or measure, complete with the wording and the format provided. There are two important exceptions. First, new items can usually be added without endangering instrument validity. For example, adding a new content area to the MMPI is completely acceptable as long as standard items are retained. The converse is not true; items cannot be subtracted without modifying the instrument in ways that are not readily interpretable. Subtracting items—even a small number—renders the results incomparable to those found in other studies. Second, items can be deleted when the recommended instrument is not a scale or some other measure of a construct (e.g., a diagnostic criterion) but simply a useful collection of items (e.g., on demographics). Examples include many of the instruments covered in the chapters on demographic characteristics, alcohol and drug use history, and medical history.

Modification of Methods for Data Collection

Resources or design decisions in a particular setting or research project often make it difficult to administer a measure with its original format. The largest distinction in this area is between paper-and-pencil questionnaires and interviewer-administered ones. When there is a shortage of interviewers, use of paper-and-pencil measures is desirable or even necessary. In settings where telephone interviews are conducted, use of paper-and-pencil measures is obviously not possible. Investigators should limit their choices to instruments designed to be used within the particular constraints imposed by their research settings. Changing the mode of administration from paper-and-pencil to interview or vice versa introduces an unacceptable amount of uninterpretable variability or "noise," unless systematic evaluation is first conducted to ensure that findings are comparable. Work in the area indicates the degree to which the need for comparability in methods for obtaining information is frequently ignored. As indicated previously, the American Psychiatric Association's DSM-III-R heralded major advances in increasing the comparability of reports on psychiatric diagnosis. Diagnostic criteria were specified in detail and operationalized to a larger degree than in previous diagnostic systems. However, many investigators who have adopted DSM-III-R criteria in their work have failed to synthesize or specify their methods for obtaining information to make a diagnosis. And, while use of comparable diagnostic criteria is likely to enhance the generalizability of psychiatric diagnoses, diagnostic variability can arise from at least five sources identified by Spitzer and colleagues (1975): (1) criterion variance caused by different raters basing diagnoses on different criteria; (2) information variance that stems from different raters basing diagnostic decisions on different amounts and types of information; (3) observation variance that results from differences in the way individual raters detect and evaluate the significance of subjects' responses; (4) occasion variance that arises when subjects display different aspects of the same disorder at different observations; and (5) subject variance that results when subjects manifest different disorders at different times. The DSM-III-R is designed to reduce only one of these sources of variability—criterion variance.

Although criterion variance has been identified as the single greatest factor in reducing reliability of psychiatric diagnosis (Spitzer et al. 1975), the other four sources of variance mentioned above may remain unaffected by decreasing criterion variance. To reduce information variance and observation variance, structured clinical interviews have been developed, such as the Schedule for Affective Disorders and Schizophrenia (Endicott and Spitzer 1978) and the Diagnostic Interview Schedule (Robins et al. 1981). Without the use of structured interview schedules, it is doubtful that diagnosticians can make their interviews complete enough to determine whether criteria for a wide range of diagnoses have been met. Also, because it is difficult to mentally retain the criteria which define the many DSM-III-R diagnoses, the structured interview helps assure more precise diagnoses.

Yet, even with the use of structured diagnostic interviews and specified, operationalized diagnostic criteria, considerable uncontrolled variability exists in making psychiatric diagnoses. This yields reliability statistics that are often far short of the ideal. Criterion variance will remain to the degree that the criteria are not completely operationalized. Information variance will continue to result when questions are worded in different ways or when subjects respond to the same question in different ways. Observation variance will operate to the degree that different raters have variable training, experience, and acuity of observation. Occasion and subject variance cannot be reduced because of the complex and variable nature of the phenomena under study.

The discussion of psychiatric diagnosis has been elaborated upon to illustrate the extent to which adherence to common methods of collecting and interpreting data is crucial for investigating a complex subject area, as well as difficulties in following such a procedure. Given the many uncontrollable sources of variability in psychiatric diagnosis, even the most rigorous attempts to use standard methods are only partly successful. Most of the content areas covered in this publication share the same problems as psychiatric diagnosis. Using standard instruments in the way described by the originators is only a first step in reducing uninterpretable variability or "noise" from an investigation. Given the many likely uncontrollable sources of variability, the investigator should maximize consistency in those areas that are under his or her control.

Some Specific Considerations in Evaluations of Substance Abusers

Managing Substance-Induced States

The defining characteristic of substance abusers is frequent and/or excessive use of substances which induce altered mental states. In obtaining information in any of the areas covered in this publication, the subject is, at a minimum, required to remember events. Often the subject is asked also to make complex judgments or evaluations about his or her current and past life. The extent to which the validity and reliability of information obtained are reduced because of drug-induced states has been studied only infrequently. However, in evaluating substance abusers, the investigator must make design decisions that systematically take into account the subject's substance-induced state. Two domains in which design decisions need to be made relate to (1) the timing of the assessment, and (2) the time period to be covered by the assessment.

Regarding the subject's ability to participate in completing the measures discussed in this publication, there are four general states that relate to psychoactive substance use:

- acute intoxication, which is usually limited to less than 24 hours following drug ingestion;
- steady-state use of the drug, during which time the subject has ingested sufficient amounts of a drug to which he or she is tolerant to avoid withdrawal symptoms, but not enough to induce an acute intoxicated state;
- withdrawal states, which result during abstinence from a drug on which the subject has become dependent; and
- extended abstinence, during which the subject has curtailed substance use for a sufficient time so he or she is no longer experiencing noticeable or persistent withdrawal symptoms.

Ideally, the investigator could evaluate all subjects during a period of extended abstinence in which drug-induced impairment of cognitive acuity or motivation to cooperate and drug-induced mood changes are not factors in conducting and interpreting examinations. However, for most settings and for subjects who use many types of drugs, subjects in extended periods of abstinence are comparatively rare. For example, a typical pattern for opiate abusers is to use opiates more or less steadily for a period of years. After entering treatment, the most likely form of therapy is methadone maintenance, which involves moving the subject from steady-state use of one powerful opiate to steady-state use of another.

The more typical subjects in most treatment settings are available to be evaluated either shortly after cessation of substance use or during steady-state use of the substance. In followup studies in which the purpose of the investigation is to detect long-range treatment effects from different programs, the investigator expects that some proportion of subjects will have relapsed to regular drug use and that control over the subjects' drug state at the time of re-interview is likely to be minimal. To examine subjects during steady-state use requires the investigator to carefully consider the type of influence the current drug state will have on the evaluations being planned and subsequently to develop guidelines for handling the drug state consistently across subjects. Both cognitive and psychological effects need to be considered, for reasons discussed later in this chapter.

In developing guidelines, the investigator needs to consider not only the four drug-related states described above, but also the direct drug effects and abstinence syndromes for the type of drug the subject may be using and the pharmacodynamics (e.g., half-life) of the substances. For the content areas covered by instruments referenced in this publication, types of substances being used can be grouped into the following areas on the basis of cross-tolerance or similarity of likely effects on assessment:

- opioids;
- barbiturates, sedatives, alcohol;
- hallucinogens, PCP, cannabis;
- stimulants; and
- nicotine.

Regarding pharmacodynamic properties of the drugs vis-a-vis their effect on evaluations, the most important features are the rapidity of absorption and half-life (that is, the amount of time required to reduce blood levels of the substance by half). As a rule of thumb, the more rapid the absorption and the shorter the half-life, the more intense and the briefer the duration of the "high" or intoxication state. Likewise, the intensity of the abstinence syndrome is proportionately higher and the duration briefer for drugs with a shorter half-life.

When the investigator takes into consideration the four drug-related states, the five general classes of substances inducing these states, the variability in half-life for substances within these categories, and the fact that most substance abusers use a variety of substances regularly, the development of guidelines for timing of evaluations and for the time period on which to base evaluations may appear impossibly complex. However, several steps can be taken to reduce the distortion of findings that result from variability in drug-induced states across subjects and across evaluations. Six such steps are summarized below.

- Before the evaluation, determine the types of substances used, the amount or frequency of use, and, if possible, the amounts used in the past week and the past 30 days. The more detailed information one can obtain about the subject's actual substance use, the more accurate one can be in judging when the examination should take place.

- Prior to the evaluation, perform at least a cursory assessment of the subject's current subjective status regarding drugs. At its simplest, this can be a 100-mm line with "high" or "intoxicated" at one end and "crashing" or "withdrawing" at the other (or a similarly designed 7-point Likert scale-type item). Subjects who are determined by defined threshold points to be either acutely intoxicated or in drug withdrawal can be eliminated from the study or rescheduled for evaluation at a later time.
- Before the evaluation, develop guidelines about the range of drug states that will be acceptable during the evaluation. Where possible, this should be based on empirical data on the degree to which various drug states influence the particular area of interest. In addition, one must consider the constraints of the setting, including the most common drug states of subjects in that setting and the amount of control that can be exercised over subjects so that they can be evaluated in a particular state. While the ideal time for most evaluations will be during extended abstinence, this status is likely to be the exception rather than the rule for subjects who are not in an inpatient or residential setting. Even in choosing abstinence as the only state in which to test subjects, the investigator should determine the length of time required for subjects to be abstinent.
- If there is no previous research to provide guidelines on the likelihood of distortion of test results by recent history of substance use, it may be desirable or even essential to conduct pilot studies to examine this factor by, for example, systematically evaluating a small number of subjects at various time periods after last regular use of the substance being investigated. Although time-consuming, the pilot step may be essential for areas of research (such as measurement of cognitive functioning) which are likely to be heavily influenced by intoxication, withdrawal effects, and/or drug-induced psychosis.
- Record the amount and timing of recent substance use for later inclusion in data analysis. In many modes of research (e.g., followup studies), the investigator must either evaluate subjects in the existing drug state or exclude intoxicated subjects from the study. Even when more control over drug state is possible, variability with regard to time and amount of last drug use will be present. By simply recording information on recent drug use, one can investigate the possible distortion of findings during data analysis. By statistically covarying or stratifying the analyses by recency of drug use, it may be possible to determine whether drug state influences the data obtained.
- In cases where the length of evaluation requires that subjects be seen for more than one test session, the investigator may group together evaluations that are likely to be unaffected by variations in the drug state and administer the measures separately from those likely to be influenced by drug state. Demographic characteristics and legal history, for example, are less likely to be influenced by mild intoxication or withdrawal states than are cognitive functioning or current mood. Evaluations involving the first two include everyone, with less regard to recency of drug use, whereas those involving the latter two should involve only subjects in a state of extended abstinence or steady-state use.

To illustrate the use of these guidelines and to provide suggestions for investigators who are interested in evaluating psychopathology in substance abusers, the decisions made by this author and colleagues in evaluating psychiatric disorders in opiate addicts seeking treatment will be described briefly (Rounsaville et al. 1982).

The setting for the majority of these evaluations was the screening and evaluation unit of a substance abuse treatment center. Opiate-abusing clients were ambulatory at the time of the evaluation, which occurred within 2 weeks of first contact with screening staff. Hence, most clients evaluated were seeking treatment during a time of regular (usually daily) opiate use or after having recently curtailed regular opiate use. From the screening and evaluation unit, clients could be referred to psychiatric hospitalization for inpatient detoxification, a residential therapeutic community, a methadone maintenance clinic, or an outpatient drug-free program which used narcotic antagonists. Delaying evaluation until clients had entered a permanent treatment setting offered no advantages. Most likely it would lead to significant attrition. Further, it would lead to wide variation across subjects in recency of opiate use.

The major task was to obtain a current and lifetime history of psychiatric symptoms using the Schedule for Affective Disorders and Schizophrenia, Life-time version (SADS-L) (Endicott and Spitzer 1978). Subjects were asked about the lifetime history of symptoms diagnostic of a wide range of mental disorders, including schizophrenia, mania, depression, anxiety disorders, and personality disorders, to determine: (1) the types and rates of mental disorders (in addition to drug abuse) presented by opiate addicts seeking treatment; and (2) the lifetime history of mental disorders that may have preceded drug abuse or complicated its course. There was considerable concern that symptoms not be confounded with the direct acute effects of the substances or the acute effects of withdrawal. Thus, guidelines were developed for determining whether a given symptom would be considered part of a mental disorder in addition to drug abuse. A number of potential drug effect/diagnosis interactions were identified. These are summarized below.

Direct Effects of Substances. A distinction was made between acute direct effects (i.e., "high" or intoxication) and chronic effects of regular heavy use.

Acute Effects. These effects are typically short-lived (usually less than 24 hours) and are directly linked to the ingestion of the drug. Many drugs of abuse produce a disinhibition state that may be described by the subject as similar to the euphoria and grandiosity of mania (especially in response to the probe questions in the SADS section on affective disorders). Other important acute intoxication effects are psychotic symptoms (hallucinations, delusions); these are commonly the effect of large doses of stimulants, hallucinogens, marijuana, alcohol, and barbiturates/sedatives.

Chronic Effects. For many individuals, including most opiate addicts seeking treatment, drugs are used daily or almost daily for a period of weeks, months, or years. Often there are no clear periods of significant duration in which drugs are not used. For periods of steady-state use, the decision was made to ignore potentially significant psychopathology if mental symptoms occurring during steady-state use were all attributed to the direct effects of the opiate use. For other drugs, different decision guidelines were developed. For example, depression that occurred during heavy stimulant use and psychoses that occurred during long periods of hallucinogen or PCP use were most likely to be attributed to the effects of the drugs.

Withdrawal Effects. For many classes of drugs, including opiates, there is a substantial withdrawal syndrome characterized by symptoms that may mimic those produced by mental disorders. As with acute drug effects, the withdrawal syndromes may be divided into acute and chronic phases, which are related to the half-life of the drug (shorter half-life equals shorter withdrawal syndrome).

Acute Phases. During the acute withdrawal phase, the person typically experiences withdrawal symptoms that are somewhat opposite those of the direct effects. Although most withdrawal symptoms are somewhat unique to the different classes of drugs, anxiety disorders and affective disorders are common symptoms of withdrawal from all drugs.

Protracted Withdrawal States. Following the acute withdrawal state that may last only a few days (usually identified by the clients as being "sick"), there may be a period of 1 to 2 weeks in which the individual has a syndrome indistinguishable from a depressive episode. This is particularly likely to occur following withdrawal from alcohol/sedatives or from stimulants. However, if the syndrome persists for more than a few weeks, it is not likely to be simply the result of a protracted withdrawal state but rather related to a coexistent psychiatric disorder.

The two major areas in which our group needed to develop guidelines for evaluating psychiatric symptoms in opiate addicts seeking treatment were: (1) timing of interviews; and (2) time periods in which symptoms elicited by the interview were considered most likely to be related to drug effects.

For timing of the interviews the following decisions were made:

- interviews of psychiatric history were conducted only after a history of recent drug use had been obtained;
- subjects were not given a psychiatric history if they indicated on a 7-point scale that they were either acutely "high" or "kicking" (only subjects receiving a "3," "4," or "5" were interviewed);

- urine specimens were obtained on a subsample to evaluate the veracity of subjects' reports regarding recency of use, including recency of opiate use;
- recency of drug use and subjects' self ratings on the 7-point "high" scale were included as possible determinants of symptomatology in the data analysis (the relationship was found to be minimal);
- subjects who had recently ingested opiates but who were comfortable during the interview and those who had recently curtailed opiate use but were not experiencing substantial withdrawal symptoms during the interview were included.

To handle the issue of psychiatric symptoms solely caused by intoxication or withdrawal effects, each interviewer used a detailed sheet which showed, drug by drug, the symptoms each drug was likely to cause. In addition, three general rules were developed:

- If the individual is a substance abuser, do not give another diagnosis if the symptoms of the other disorder occur only during the acute intoxication or acute withdrawal phase.
- Do not give a diagnosis of a psychotic disorder or affective disorder if the symptoms of these disorders occur only during extended periods of stimulant, hallucinogen, or PCP use.
- All other diagnoses can be made as if they were not drug-induced if either (a) the symptoms were present during a drug-free period lasting at least 6 months or (b) the symptoms were present during a steady-state period in which the drugs were used regularly.

The Veracity Issue

A perennial concern in evaluating drug abusers is intentional distortion or falsification of information by subjects. This concern extends beyond the universal issue of subjects presenting themselves in a socially acceptable light; it includes the incentive to falsify information because of legality issues (e.g., the possession and sale of most abused drugs are illegal, and drug abusers commonly engage in illegal activities in order to pay for expensive illicit substances). It is often assumed that these legality issues will lead subjects to minimize reports of drug use, illegal activities, or other socially undesirable behavior. Conversely, it is sometimes assumed that, in a treatment-seeking setting, there may be an incentive to maximize problems to obtain treatment earlier or to gain acceptance in a drug program in the hope of receiving a minimal sentence for alleged drug-related crimes.

Despite these issues, the research literature indicates that the information provided to researchers by drug-abusing populations is generally truthful (Amsel et al. 1976; Bale 1979; Maddux and Desmond 1975; Pompi 1979; Stevens 1972). Alcohol abusers present a special problem—that is, the tendency to deny their abuse of or dependence on alcohol. To maximize the likelihood that responses will be truthful and/or decrease denial tendencies, several guidelines should be observed:

- Clearly ensure confidentiality and the independence of research efforts from treatment decisions. Interviewers should clearly identify themselves as performing research tasks and inform the subject that the information obtained will not be shared with law enforcement officials, family members, or clinical staff unless the subject requests this in writing. Procedures for safeguarding confidentiality should be explained in detail and written in consent forms. Even these steps, however, are frequently inadequate. Interviewers should be selected who have a talent for developing a trusting relationship with substance-abusing clients. One of the most sophisticated procedures for convincing the subjects of the confidentiality of information obtained is used by the NIDA-supported national household survey of drug use in the United States (Miller et al. 1983). For this study, subjects fill out their own questionnaires, which they hold and which contain no identifying information. The interviewer asks the questions; the multiple-choice answers are completed by the subject so the interviewer cannot determine responses to questions about frequency of drug use. When the interview is completed, the subject is instructed to place the completed questionnaire into a stamped envelope addressed to the research office. The envelope is sealed in the subject's presence, and the interviewer invites the subject to accompany him or her to a mailbox for immediate mailing.

- Use more than one informant where possible. For subjects who tend to deny the extent of substance abuse, more accurate information may be obtained from a family member or "significant other." However, in the case of illicit substances, the subject may take successful precautions to hide use from others so that information from a significant other may underestimate the extent of the problem. When the subject and a significant other disagree about the extent of a problem, the investigator faces the dilemma of determining which informant should be given credence. As a rule of thumb, the informant reporting the most severe problem is likely to be the most accurate.
- Where possible, provide a measure which is not based simply on the subject's potentially distorted self-report. Such objective measures may include screening urine or taking blood specimens to determine the presence of substances about which one is inquiring. This procedure is difficult to implement in field studies and expensive. Alternatives to testing each subject include informing subjects that they may be tested later to verify reports, spot-checking a random portion of subjects, or collecting urine specimens on all subjects even though only a portion are analyzed.

Conclusion

This publication has been compiled to assist clinicians and researchers in choosing measurement techniques to attain comparability in coverage and reporting of data on substance abusers. It is heavily focused on measuring psychopathology in substance-abusing populations.

Several problems in measuring psychiatric problems have been discussed in this chapter, as has the importance of using comparable measures for these and other variables of interest. Subsequent chapters provide the reader with a relatively brief list of instruments and measures for evaluating: (1) demographic characteristics, employment, and legal history; (2) alcohol and drug use history; (3) medical history and consequences of substance abuse; (4) psychiatric diagnosis; (5) family functioning; and (6) social adjustment and social supports. For each recommended instrument, the reader will be provided a description of its reliability, validity, psychometric properties, extent of use with substance-abusing populations, and other salient information.

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Chapter II

DEMOGRAPHIC, SOCIOECONOMIC, AND CRIMINAL BACKGROUND DATA

D. Dwayne Simpson, Ph.D.

Introduction

Since the emergence of federally supported community-based programs in the 1960s and following the closing of the Federal Public Health Hospitals in Lexington, Kentucky and Fort Worth, Texas, drug abuse treatment data collection systems and evaluation research have focused primarily on the assessment of behavioral outcome criteria related to substance abuse, criminality, and productive activities. At the national level, these efforts are represented by the chronological development of the Drug Abuse Reporting Program (DARP) in 1969 (Sells 1974; Sells and Simpson 1976; Simpson and Sells 1982), the Client Oriented Data Acquisition Process in 1974 (Siguel and Spillane 1977), and the Treatment Outcome Prospective Study (TOPS) in 1977 (Hubbard et al. 1984a,b). Methodological handbooks also were published by the National Institute on Drug Abuse (NIDA) to provide technical assistance to local programs and researchers for program evaluation (Guess and Tuchfeld 1977) and followup research (Johnston et al. 1977). Collectively, these early studies and handbooks provide the foundation for data collection recommendations contained in this publication.

In recent years, there has been an increasing focus on research in psychological and social relations domains, as will be demonstrated in subsequent chapters. In part, this reflects advancements in theoretical development and assessment procedures. As explained in chapter 1, a major purpose of this publication is to bring the current status of these research developments into better focus for the field and to help guide future drug abuse research so that comparability of findings among similar studies may be improved. This chapter on demographic, socioeconomic, and criminal background data is included because of the continued recognition of the importance of these measures in the evaluation process—that is, to describe the sample under study, to define appropriate subgroups for specific evaluation issues, to obtain control variables for equating differences in group composition, and to establish baseline measures for determining changes in outcome criteria over time. It is intended to serve as a practical guide for instrument development.

Recommendations for data collection and a suggested format are illustrated in the TCU/DATAR project forms shown in Appendix A. The measures suggested are compatible with other questions or scales selected from other areas described in the following chapters. The coverage here, however, is not exhaustive. For example, depending on the particular program and evaluation objectives involved, some sociodemographic or background information may require substantial expansion and specialization beyond the measures suggested here. Furthermore, it should be noted that the present chapter does not address background or baseline data associated with the particular substantive areas discussed in later chapters.

General Measurement Issues

Numerous instruments have been developed for treatment assessment. Those associated with some of the larger and more visible data bases in the drug abuse field have been assembled as reference instruments for this publication. Some of these are based on evaluations planned and conducted for specific programs, whereas others were developed for multiple program locations as part of national studies. By necessity, the latter instruments are usually more general in focus than those designed for particular programs; it is these more general instruments that best illustrate the recommendations made in this chapter. The recommendations are based primarily on the DARP and the subsequent TOPS. The DARP includes forms developed for intake (designed in 1969), bimonthly during-treatment assessment, 6-year followup, and 12-year followup. The TOPS includes forms developed for intake (designed in 1977), 1- and 3-month in-treatment assessments, and 3-month to 2-year followups. The instrumentation and data collection procedures for these related national studies have been developed and refined over many years and are described in part in a NIDA publication by Johnston et al. (1977).

Given the recognized need to standardize some of the drug abuse program evaluation procedures and instrumentation to enhance comparability of findings, the recommendations that follow will identify several major data elements and suggest appropriate measurement procedures. However, in regard to comparability of results across studies, the selection and use of similar baseline and measurement intervals become extremely important issues. Several factors are relevant to the decision to use similar intervals; these include consideration of prevalence rates for behaviors being measured, emphasis on short-term and long-term behavioral problems at the date of intake, and the data collection strategy and schedule preferred by the program for during- and after-treatment measures. For most applications, it is recommended that during-treatment assessments be based on 1-to-3-month data collection periods and that post-treatment evaluations be based on 1-year periods. Thus, intake instruments should include both 1-month and 1-year preadmission baseline data so they will be compatible with during-treatment records and post-treatment behavioral changes, respectively. Shorter intervals sometimes fail to detect changes (especially for low prevalence behaviors) and involve heavier data collection burdens; longer intervals increasingly become confounded with uncontrolled and unmeasured influences on behaviors over time. Depending on the circumstances, however, individuals tend to be more willing to disclose information about deviant behaviors that occurred "last year" than "last month."

With regard to the background data—especially those used as baseline indicators—it is necessary also to obtain information concerning "time at risk" for appropriate criteria. For instance, interpretation of drug and alcohol use, weeks of employment, or number of arrests during specified time intervals before program admission should take into account whether the individual spent any or all of that time in a jail, prison, hospital, residential treatment program, or some other institution that would have restricted the level of risk. If confinement occurred, adjustments using "rate per unit time at risk" or other comparable procedures should be considered to represent behavioral criteria.

Data Collection Recommendations

The sociodemographic and background data discussed below are organized into seven sections:

- client identification and location records,
- demographic characteristics,
- program intake,
- family status and living arrangements,
- employment history,
- criminal history, and
- optional areas.

Client Identification and Location Records

Because the ability to locate clients for post-treatment followup evaluation studies is so important, thorough identification records must be completed and securely maintained. These records serve to link anonymous client identification (ID) numbers used in data bases with actual client identities. For the purpose of the followup research, it is essential that these data be accurate and contain the "footprints" needed to locate those clients selected for further study. The information should include the client's complete legal name (as well as aliases or nicknames), social security and driver's license numbers, current and recent addresses (and mailing addresses, if different), favorite hangouts, telephone number, and places of current and recent employment. Equally important is information on the names, addresses, and telephone numbers of relatives and friends with whom the client maintains contact (see the TCU/DATAR Client Identification Folder in Appendix A).

These data should be recorded in standardized form and include, for each client, the client ID number and the date the information was obtained. If possible, the information should be updated over time to reflect changes in address during program participation. These records must be protected carefully, and it is advisable to maintain duplicate copies of these files in a remote and secure location.

Demographic Characteristics

The data elements of age, race-ethnicity, and gender serve obvious descriptive purposes; these characteristics are also necessary for separating categories or subgroups for evaluation. For instance, employment and criminality data are related differentially to gender and age group and, sometimes, demographically homogenous groups must be identified for special analysis. Age should be obtained in terms of age at last birthday (i.e., in years, not precoded categories), as well as date of birth. Race-ethnicity should be recorded by precoded categories specified in accordance with the particular populations being served.

Program Intake

The circumstances surrounding client admission to program services reflect on several aspects of program evaluation; these include the manner in which the services are linked with other community service agencies and the local criminal justice and law enforcement systems. Previous contacts with the drug treatment program, reasons for current admission, referral sources, insurance coverage, and pending legal status are all relevant measures. For some programs, special legal, medical, or employment referral networks may be involved and, if so, would require further details for assessment purposes. Descriptions of personal reasons and expectations for treatment also help determine client motivation.

Family Status and Living Arrangements

In some instances, the focus of questions concerning family status depends on the age level of the program clientele. For adults, marital status (married or living as married, divorced, separated, widowed, or never married), number of previous marriages (legal or common law), and number of children (and possibly their ages) are relevant data because they frequently represent sources of influence on drug use, as well as types of treatment and ancillary services used by clients. (For adolescents, similar data should be recorded with reference to parents.)

In addition to family structure, living arrangements should be described. Types of residence and time lived in each (such as family dwelling, rooming or boarding house, hospital, residential treatment, and jail), persons lived with, and length of time at current residence help establish the nature and stability of living arrangements. Mobility or transiency may be reflected by recording the number of residential moves during the baseline and subsequent periods, especially moves to different neighborhoods or cities.

Places and durations of residential arrangements before program intake are particularly important in establishing baseline and time-at-risk periods for behavioral criteria. Since treatment referrals frequently are associated with criminal involvement and the legal process, details on jail or prison confinements and durations (clearly distinguished from place of family residence) are crucial for purposes of program evaluation.

Education and Employment History

Detailed histories of lifetime employment episodes and educational history are time demanding and usually impractical. Thus, the degree of detail and the particular focus of these questions must be determined in the context of program services and evaluation objectives. For instance, programs with specialized vocational training and job placement services may require more extensive employment-related data than programs without such services. But for most programs, it is sufficient to collect data only on educational level, job history, and sources of support during the baseline periods. Current employment status may influence treatment alternatives and services for clients; however, work history data—especially for clients recently released from jail or the hospital—are needed to develop quantitative baseline measures for performance comparisons over time. (For programs serving adolescents, emphasis may be shifted from employment to school-related performance criteria.)

Educational Background. Highest grade completed and special vocational training should be recorded for the client, as well as for the client's parents. Status as a student during the employment baseline period also should be recorded, if appropriate.

Employment History. Legitimate employment during the baseline period should be described in terms of the amount of time employed and the type of job or occupation. Among drug users, low employment rates and frequent part-time or day labor jobs complicate the usual data collection process. For most purposes, it is sufficient to obtain data on the overall duration of employment on full-time (35 hours or more per week) and part-time jobs—for instance, the number of weeks in the past year with a full-time job, with a part-time job, and unemployed (totaling 52 weeks). To indicate stability of employment, the length of time employed on the current (or last) job should be recorded also, together with the number of different jobs or employers during the baseline periods.

In some instances, adjustments to employment data are necessary to determine either time at risk or the amount of time actually available for employment. For example, prolonged hospitalization or incarceration during the year before treatment restricts employment opportunities; this time, therefore, should be excluded from the time used for calculating employment rates. In addition, time spent as a student and homemaker should not be equated with unemployment. For programs serving high percentages of youth still attending school or women who are homemakers with children at home, a general indicator of "productive activities" may be more appropriate than measures of gainful employment.

Type of job or occupation should be recorded and coded according to job classification level. Among substance abusers in public treatment programs, the predominant occupations are in unskilled labor categories; thus, it is helpful in some instances to obtain information on the rate of pay. It is worth noting, however, that efforts to obtain monthly income data are often unreliable because of varying pay periods and the complications associated with distinguishing between gross pay and take-home pay after deductions for taxes, fringe benefits, etc. It is advisable, therefore, to use the simplest unit available for recording income; necessary calculations for standard measurements can be made later during data editing and coding by taking into account "time worked" and the metric reported (i.e., hourly wages, weekly pay, annual salary, etc.).

Sources of Support. In order to place occupational data in a broader context, it is helpful to obtain information on the relative amount of income associated with several major financial sources; these include legitimate job, unemployment compensation, public assistance, family or friends, and illegal activities. While it would be ideal to obtain the actual amount of income from each source of support during the baseline period, such reports, as noted above, are often unreliable or difficult to quantify. Additional complications arise from the fact that support might be "in kind" and include food, services or goods other than money per se. Qualitative rating scales (with using e.g., all, most, some, none categories) are often necessary for collecting these data.

Criminal History

Involvement in criminal activity represents one of the strongest background predictor variables of post-treatment outcomes for drug abusers (Simpson and Sells 1982). However, like employment history, criminal background is complicated to measure because of:

- difficulty in classifying and aggregating crime into comparable categories,
- low arrest and conviction rates for crimes committed,
- the vulnerability of known drug users in some locales who are picked up frequently without arrests,
- complexities and nuances of the legal process (including plea bargaining), and
- variations over time and jurisdictions in legal punishment for similar crimes.

In addition, criminal involvement frequently initiates the admission process to a drug abuse treatment program which, therefore, may bias short-term preadmission baseline records toward inflated levels. Recent criminal events, and any ongoing legal proceedings at the time of program intake, are important to document, but they should be balanced with data from longer term baseline periods to give more accurate accounts of criminality rates. Historical data also are needed to help establish lifetime criminality patterns.

Qualitatively, there are five major dimensions which are generally used to represent lifetime and pretreatment criminal involvement. These are discussed in greater detail below and include:

- number of legal contacts or arrests,
- types of legal charges associated with arrests,
- length of confinement in jail or prison,
- parole or probation status, and
- illegal activities not accompanied by arrests or incarcerations.

Access to official criminal justice records (e.g., police rap sheets, court records, jail and prison files) can help to clarify and validate self-report data in these five areas; however, such records are limited in accuracy and thoroughness and present problems in ascertaining unique respondent identification. They also may involve restricted coverage across time, geographic areas, and separate legal jurisdictions. Evidence for the veracity of self-reported arrest and incarceration by drug abuse treatment sample subjects has been positive in the DARP and the TOPS (Hubbard et al. 1984a,b; Simpson 1990; Simpson et al. 1976).

Legal Contacts. Various factors influence the drug abuser's probability of police pickups for questioning, such as differences in local pressures exerted on drug users and trafficking, and variations in police knowledge and visibility of local drug users. There also are difficulties associated with interpreting convictions because of variations in time delays and plea bargaining in the legal process. Thus, reports of the number of arrests generally serve as the preferred indicator of legal contacts. While the technicalities of arrests, such as length of time detained without arrest, may vary somewhat from area to area, the number of arrests seems to be the most easily defined and reported indicator of police contacts with respondents. If additional information on police pickups and court convictions is obtained, special care must be taken to avoid duplicate counting of legal contacts that are part of the same episode.

Legal Charges. Reasons associated with arrests also are more easily and meaningfully reported than those associated with pickups and convictions. (With respect to convictions, the final legal charges may bear little resemblance to the reasons for the original arrest.) The greatest difficulty, however, is in categorizing the many types of criminal charges into a smaller number of subsets that are meaningful and useful for analytic and descriptive purposes. One alternative is to have the original charges or reasons for arrests recorded verbatim and later coded into standard offenses, such as those included in the Uniform Crime Reports (UCR) prepared by the Federal Bureau of Investigation (FBI).

A suggested revision for these UCR categories, however, is to distinguish between simple possession of drugs and trafficking or dealing. (Possession charges associated with marijuana should be distinguished from the other drug-related charges because of the current differences between states with respect to their statutes on marijuana possession.) For purposes of most analyses and summary reports, the categories of criminal offenses can often be reduced ultimately to:

- violent crimes (such as homicide, rape, robbery, and assault),
- crimes against property (such as burglary, car theft, arson, and vandalism),
- crimes of acquisition (such as larceny, forgery, fraud, and gambling),
- prostitution,
- trafficking,
- possession of narcotics,
- possession of marijuana, and
- other offenses (which can also be broken down in more detail, as needed).

These are listed and cross-referenced with UCR offense categories in table 1.

Incarcerations. Confinements in jail and prison are typically reported in terms of number of times jailed for one or more nights and the total duration of incarcerations (including total time spent in jail or prison and, in some cases, the number of extended incarcerations lasting a month or longer).

Probation or Parole. This legal status is recorded and analyzed in some studies because of the legal supervision associated with periods of parole or probation and the evidence of possible outcome behavior impact of some intensive supervisory procedures, such as those represented in the California Civil Addict Program (Anglin et al. 1981).

Illegal Activities. Since the rate of apprehension for criminal offenses is generally low, indicators of formal or official legal contacts tend to underestimate levels of actual criminal activity. Self-reported criminality is the only practical method for obtaining estimates of the full extent of this activity. Past studies have demonstrated the willingness of many drug abusers entering treatment to report in private interviews illegal behavior not detected by legal authorities. In the drug abuser population, the focus is generally on sources of illegal support or income-generating crimes. This information can be collected in varying degrees of detail, but efforts should be made to obtain information on the frequency of occurrence.

Table 1. Classification of criminal charges (based on the FBI Uniform Crime Report categories)

Part I Offense Categories:

1. Criminal homicide (murder and non-negligent manslaughter)
2. Forcible rape
3. Robbery (grand theft)
4. Aggravated assault
5. Burglary—breaking and entering (grand theft)
6. Larceny—theft (except motor vehicle theft)
7. Motor vehicle theft
8. Arson

Part II Offense Categories:

9. Other assaults (simple/no weapons, hijacking, kidnapping)
10. Forgery and counterfeiting
11. Fraud (fraudulent conversion and obtaining money or property by false pretenses)
12. Embezzlement
13. Stolen property (buying, receiving, possessing)
14. Vandalism
15. Weapons (carrying, possessing, etc.)
16. Prostitution and commercialized vice
17. Sex offenses (except forcible rape, prostitution, and commercialized vice)
18. Gambling
19. Offenses against the family and children
20. Driving under the influence of alcohol
21. Drunkenness
22. Disorderly conduct
23. Vagrancy
24. All other offenses (including major traffic violations, parole violations)
25. Suspicion
26. Curfew and loitering laws, trespassing
27. Runaways
28. Possession of marijuana (simple possession, paraphernalia)
29. Possession of other drugs or narcotics (simple possession, paraphernalia)
30. Trafficking drugs or narcotics (dealing, sales, possession with intent to sell)

Summary Classification (cross-referenced to categories above):

1. Violent crimes (1, 2, 3, 4, 9)
2. Crimes against property (5, 7, 8, 14)
3. Crimes of acquisition (6, 10, 11, 12, 13, 18)
4. Prostitution (16)
5. Trafficking (30)
6. Possession of narcotics (29)
7. Possession of marijuana (28)
8. Other crimes (15, 17, 19-27)

Note: The original UCR category number 18 was replaced with three new categories (i.e., numbers 28-30) in this table.

Optional Areas

To meet the objectives of some program evaluations, more extensive data may be required in one or more of the areas just discussed, as well as other background areas. Examples include cultural or family heritage (race-ethnicity of parents, U.S. citizenship, length of time lived in the United States, and language spoken in the home), religion of client and parents (affiliation, attendance, and personal significance), and military experience (length of active service, tours of duty, dates, and type of discharge). In addition, sources of positive and negative influences and support involving friends, family, and other social or environmental forces are important, as discussed in later chapters. Finally, inclusion of a section for interview comments, to be completed after the interview, is advisable to obtain a description of the data collection setting. In particular, this comments section can include descriptions of the physical conditions for the interview (duration, location, and privacy), respondent characteristics (attitude, attention, level of comprehension, articulation, and physical traits), and interviewer ratings of respondent truthfulness and data accuracy.

Conclusion

Data collection activities for research purposes—as opposed to those designed for strictly clinical or other immediate service applications—often encounter some resistance from front-line service providers who, naturally, show a greater interest in client care than in evaluation research. Unfortunately, evaluators frequently deserve their reputation as "intruders" because they often fail to communicate the evaluation purpose, results, and applications to service providers. More importantly, because of inadequate research planning and lack of sensitivity to program operations, evaluation protocols may exceed reasonable limits for data collection demands on program staff and for response burdens on clients. This situation frequently results in unreliable data because of poorly designed and unusable research measures obtained in interview settings with low staff morale.

Solutions to these problems are not universal or simple. They obviously require integrated and cooperative efforts between evaluation and treatment staff, efforts based on an accurate understanding of the reasons for and implications of the data being obtained. In general, data collection procedures have three major applications:

- counselor records on delivery of services,
- monitoring and documentation of overall program service delivery efforts, and
- program evaluation.

In other words, data should be used directly to simultaneously meet the needs of:

- counselors and service providers,
- program managers and funding sponsors, and
- program evaluators.

Among the most difficult but important data applications to address in any data collection system are those which involve the counselor-service provider—the crucial link in maintaining the quality of data. Feedback of data must be not only responsive and sensitive to treatment process needs (such as the need for diagnostic test score results) but also prompt and reliable. Of particular importance in this regard is the potential offered by the emerging use of microcomputers—that is, for data collection by self-administration procedures, as well as for provision of immediate test scoring and feedback.

It is in this context that data collection instruments and procedures must be developed. The immediate objectives, therefore, are to identify the most important information for collection and then to make sure the procedures are both efficient and reasonable for the data collection staff and clients. This process includes instrument refinement and possible item reduction in the pilot testing phase, which is accompanied by detailed planning of analyses for measures to be obtained in the evaluation study. A combination of program evaluation priorities, response burden limits, and comparisons of the relative quality of individual data items will guide the final selection and design of instrument contents.

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Chapter III
ALCOHOL AND DRUG USE HISTORY, PATTERNS, AND PROBLEMS

Thomas F. Babor, Ph.D., M.P.H.

Research on the treatment of substance abuse is a relatively new and rapidly expanding field of inquiry. It is a field marked by neither conceptual consensus nor methodological rigidity. There are diverse approaches to treatment evaluation, in part because the natural history of the disorder is complex and not well understood, in part because of competing theories about what variables should be studied. Nevertheless, commonalities do exist in the plethora of assessment instruments that have been developed for use in clinical settings. After almost 2 decades of competition in the substance abuse treatment marketplace, it is appropriate to take stock of the assessment instruments and technologies that have been developed to measure what are clearly the most crucial variables in treatment evaluation research: psychoactive substance use, its developmental history, and patterns of misuse, and problems associated with abuse. Given the clinical and theoretical importance of alcohol misuse among drug abuse clients (Gardner 1981; Rounsaville et al. 1983), the measurement of this variable will be given appropriate emphasis in this chapter.

Drug self-administration is the *sine qua non* of substance use disorders. Although this truism may seem elementary, it often is neglected in the course of clinical assessment and treatment evaluation because it is assumed that substance users, once diagnosed, are all of a similar kind and that, once dependence has developed, any use is abuse. In reality, there are tremendous differences in the patterns and amounts of substance use exhibited by treatment-seeking populations before and after they are encountered in clinical settings. To ignore this diversity is to miss some of the most important clinical data available for diagnosis, treatment planning, and treatment evaluation. For example, etiology sometimes can be inferred from the type, pattern, and duration of substance use. Diagnosis often is based on the consequences and symptoms associated with substance misuse. With increasing frequency, treatment planning is based on the assessment of antecedents and consequences of drug-taking behavior, in contrast to the more traditional attention to the underlying symptoms. Sometimes treatment outcome can be predicted quite well from the client's previous history of use. Finally, treatment evaluation may best be conducted by means of careful monitoring of the client's drug-taking behavior. For these reasons, it is important to choose carefully when constructing an assessment battery to assure that substance use variables are measured adequately.

Unfortunately, no single instrument has yet been devised to suit the needs of all clients, counselors, therapists, and treatment evaluators. Although there is no lack of available instruments, the appropriateness of any one depends on the characteristics of the clients, the nature of treatment, and the objectives of the evaluator. In this chapter, an attempt will be made to provide an overview of current assessment instruments useful for four broad tasks likely to confront clinicians and researchers:

- screening for alcohol and drug abuse;
- estimation of global severity;
- diagnosis of substance abuse and dependence according to formal diagnostic criteria; and
- differential assessment of use patterns, dependence symptoms, and disabilities related to current and lifetime use.

The reader is asked to consider the relative merits of the different instruments discussed in relation to the particular demands of these different assessment tasks.

Screening and Global Estimation of Severity

Screening instruments designed for early detection and case finding may be one of the first components to consider in the design of an assessment battery. An instrument like the MacAndrew Alcoholism Scale (MAC) (MacAndrew 1965) may be useful in identifying borderline cases who are suspected of minimizing or denying the extent of their substance use. The Drug Abuse Screening Test (DAST) (Skinner 1982) and the Michigan Alcoholism Screening Test (MAST) (Selzer 1971) are brief, easy-to-score, self-report inventories developed to facilitate case finding. They also may be used to provide a global assessment of the client's lifetime involvement with drugs and alcohol. As such, they may be useful for the comparison of clients admitted to different facilities and may serve also as predictors of outcome. As a screening instrument, the MAST should alert the clinician to the possible existence of an alcohol problem in drug-abusing clients. Ideally, screening should be conducted for the purpose of early identification, which is the primary goal of the Problem Oriented Screening Instrument for Teenagers (POSIT) (Radhert 1991) and the Personal Experience Screening Questionnaire (PESQ) (Winters 1988). Each of these instruments is discussed below. A more comprehensive review of alcoholism and drug abuse screening instruments can be found in papers by Babor and Kadden (1985) and Babor (1990).

MacAndrew Alcoholism Scale

This scale consists of 49 items of the Minnesota Multiphasic Personality Inventory (MMPI). Originally developed to improve discrimination between psychiatric patients and alcoholics (MacAndrew 1965), subsequent investigation (Lacher et al. 1976) revealed that heroin addicts, polydrug users, and nonalcoholic problem drinkers also score high on this scale. The items appear to measure a general addictive propensity as reflected in characteristics associated with alcohol and drug misuse, such as impulsivity, acting out, and pressure for action. The MacAndrew Alcoholism Scale (MAC) score tends to remain stable throughout the course of treatment and posttreatment and does not correlate with age. This suggests that it measures a relatively stable trait cluster.

The scale may have general utility in the identification of patients with a history of, current involvement with, or a potential for alcohol and drug misuse, especially in settings where patients have not presented themselves specifically for substance abuse treatment. Although alcoholics and heroin addicts generally differ from other general psychiatric patients in average scores, application of the recommended cutoff point (greater than 23) often has resulted in high rates of false positives, that need to be excluded by other means. It should be noted that since the scale was originally normed on hospitalized psychiatric patients, a low MAC score may not reflect "normal" adjustment. Although the scale may be administered separately from the full MMPI, it may be advantageous to use the MMPI clinical and validity scales to assist in its interpretation. The MAC scale may be particularly useful in settings where there is reason to believe that respondents may be motivated to minimize or deny their substance misuse or where it is desirable to identify persons with a general propensity toward addictive behavior at an early stage of development.

Drug Abuse Screening Test

The Drug Abuse Screening Test (DAST) is a brief instrument designed for clinical screening and treatment evaluation research. The 20-item DAST yields a quantitative index of consequences and dependence symptoms related to drug abuse. It takes approximately 5 minutes to administer and may be given in either a self-report or interview format. The DAST may be used in a variety of settings to provide a quick index of drug abuse problems. In an initial validation study (Skinner 1982), the DAST total score differentiated among clients with drug problems, mixed drug and alcohol problems, and alcohol problems only.

The original DAST contained 28 items that were modeled after the widely used Michigan Alcoholism Screening Test (MAST) (Selzer 1971). A shortened version of the DAST was developed by using 20 items that discriminated equally among the criterion groups (Skinner 1982). The 20-item version was found to have excellent diagnostic validity in classifying patients according to the third edition of the *Diagnostic and Statistical Manual* (DSM-III) criteria for substance abuse or dependence (Gavin et al. 1989). Since the measurement properties of the 20-item DAST are virtually identical to the original version, the shorter DAST is now recommended for routine use. The DAST is brief and inexpensive to administer, and provides a quantitative index of the extent of problems related to drug abuse. The routine administration of the DAST could serve as a convenient method of case finding. The DAST also could provide a reference standard for monitoring changes in client populations over time and for comparing clients at different treatment centers. Since the content of the DAST items is obvious, clients not motivated to cooperate may fake results.

The DAST total score orders individuals along a continuum with respect to their degree of problems or consequences related to drug abuse. A score of zero indicates that no evidence of drug-related problems was reported. As the DAST score increases, there is a corresponding rise in the level of drug problems reported. The maximum score of 20 suggests substantial problems. One also may examine the DAST item responses to identify specific problem areas such as family or work.

Michigan Alcoholism Screening Test

The Michigan Alcoholism Screening Test (MAST) was designed as a brief, easily administered, structured interview to be used by nonprofessional personnel for the detection of alcoholism (Selzer 1971). Consisting of 25 true-false statements describing medical, social, and behavioral events typically associated with excessive drinking, the MAST has demonstrated a considerable degree of validity in distinguishing between known groups of alcoholics and nonalcoholics (Brady et al. 1982; Hedlund and Vieweg 1984). Although derivation of the MAST apparently was not related to any systematic theory of alcoholism, factor analytic studies suggest that a broad underlying dimension of alcoholism may be what is measured by the test (Zung 1982). Classification errors that occur with the MAST include both false-positive identifications and false negatives among those who would deny any drinking-related problems (Miller 1976). Jacobson (1976) suggests that the false-negative problem could be overcome by administering the test to a reliable informant. While this procedure may help correct the classification problem, it also increases the effort required to obtain valid data and thereby reduces the value of the MAST as a screening device. Another source of classification errors is related to the way in which the MAST questions are worded. Because respondents are given a very broad time frame to report about (e.g., "Have you ever . . . ."), recovering alcoholics who are currently abstinent may nevertheless screen positive. This problem can be corrected by using an alternate form of the MAST (Magruder-Habib et al. 1982) that specifies a recent reporting period.

The Problem Oriented Screening Instrument for Teenagers

The Problem Oriented Screening Instrument for Teenagers (POSIT) is a 139-item screening questionnaire designed to measure problem severity in 10 domains that are often related to substance abuse and that are amenable to treatment intervention (Radhert 1991). The domains include substance abuse, physical health, mental health, family relations, peer relations, and aggressive behavior-delinquency. A quick scoring procedure provides an estimate of the absolute and relative severity of each problem area, as well as a global severity score. Each scale contains three types of items: general, age-related, and "red flag." General items add one point to the risk score for each problem area. Age-related items contribute to the risk score only for adolescents in a specified age range. Endorsement of red-flag items indicates the need for further assessment. The current scoring system is based on the clinical judgment of expert clinicians. As in all screening tests, scores that are above the designated cutoff points do not necessarily indicate the actual existence of a problem. Rather, they identify problem areas in need of further evaluation.

POSIT is part of a procedure recently developed by an expert committee of clinicians and scientists commissioned by the National Institute on Drug Abuse (NIDA) (Tarter 1990). This integrated procedure consists of three stages:

- identification of substance abuse, health disorders, psychiatric disturbance, and psychosocial maladjustment by means of POSIT;
- a detailed diagnostic evaluation of the problems identified in the screening stage; and
- formulation of a treatment plan that is designed to fit the medical, psychiatric, and psychosocial problems identified by the diagnostic assessments.

The Personal Experience Screen Questionnaire

The Personal Experience Screen Questionnaire (PESQ) was designed as a brief screening tool for professionals and service providers. It identifies adolescents in need of "assessment referral," that is, young adults whose substance use profiles indicate that they should be referred to a more systematic diagnostic assessment (Winters 1988). The PESQ classifies respondents into three levels of problem severity:

- low (green flag);
- medium (single red flag); and
- high (double red flag).

The red flag designations suggest that further evaluation is likely to produce a positive diagnosis and treatment referral. The red flag groups score significantly above what would be expected of the general school population. The double red flag classification represents a score comparable to that attained by a normative sample of adolescents undergoing treatment for substance abuse.

Diagnosis

In contrast to screening, diagnosis typically involves a broader evaluation of signs, symptoms, and laboratory data as these relate to the history of the patient's illness. The purpose of diagnosis is to provide the clinician with a logical basis for planning treatment and estimating prognosis. Diagnosis also may serve a variety of administrative and scientific purposes. When a patient is suspected of having a substance use disorder, diagnostic procedures are needed to exclude false positives and borderline cases. Reimbursement policy increasingly demands that a formal diagnosis be confirmed according to standard procedures or criteria. The need for uniform reporting of statistical data, as well as the generation of prevalence estimates for epidemiological research, often requires a diagnostic classification of the patient. Finally, research on substance use disorders can be enhanced considerably when subjects or cases included in a study sample meet standard criteria for having a particular diagnosis.

At present, several formal diagnostic systems are available for use in clinical assessment and research. The most widely accepted diagnostic system in the United States for substance use disorders is the criteria formulated by the American Psychiatric Association (1987) in the revised third edition of the *Diagnostic and Statistical Manual (DSM-III-R)*. Other systems, used primarily for epidemiological and clinical research, include the Feighner Criteria (Feighner et al. 1972) and the Research Diagnostic Criteria (Robins 1981). Given the enormous public health implications of substance use disorders worldwide, the World Health Organization (WHO) has played an important role in the formulation of classification systems and nomenclature (Edwards et al. 1981). During the past decade, WHO has refined the concept of alcohol and drug dependence to permit classification of different psychoactive substances according to an identical set of criteria (WHO 1992). These criteria permit the classification of substance use disorders within the tenth revision of the International Classification of Diseases (ICD-10).

Given the usefulness of an objective, empirically-based, reliable diagnosis of substance use disorders in various clinical populations, it is important to carefully consider the procedure to be used. Ideally, the diagnostic procedure chosen should be adaptable to a wide variety of clinical, administrative, and research needs. Fortunately, a number of instruments have been developed in recent years. One type, exemplified by the Diagnostic Interview Schedule (DIS) (Robins et al. 1982) and the Composite International Diagnostic Interview (CIDI) (Robins et al. 1988), is highly structured and requires a minimum of clinical judgment by the interviewer. These interviews are especially recommended because of their versatility for diagnosis, clinical research, and epidemiological surveys.

A second type of diagnostic interview, referred to as semistructured, does not require strict adherence to written questions. It does, however, rely heavily on the clinical experience of the interviewer and the interviewer's knowledge of psychiatric symptoms and syndromes. Two interviews of this genre are the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer et al. 1988) and the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (Wing et al. 1990).

Both types of instruments cover a wide range of psychiatric diagnoses in addition to substance use disorders. The reader undoubtedly will want to review other chapters in this source book where the relative merits of these types of interviews for other diagnoses are discussed in greater detail. In this chapter, we will introduce briefly the drug and alcohol sections of the DIS, CIDI, and SCAN to emphasize the importance of obtaining, at the very least, a formal diagnosis of the client's alcohol and drug dependence.

Developed in the late 1970s for use in large-scale epidemiological studies, the DIS is a highly structured interview capable of being administered by formally trained nonprofessional or nonclinician interviewers (Robins et al. 1982). Although it is not recommended that the substance use questions be administered independently of the other parts of the interview, a skilled interviewer should be able to obtain a reliable diagnosis by asking only the alcohol and drug questions in the appropriate order. The DIS has been the subject of a number of validation studies by using DSM-III Criteria for diagnostic classification. In one study of psychiatric patients (Robins et al. 1981), nonclinician (lay) interviewers tended to underdiagnose alcohol dependence and drug abuse, but these diagnoses nevertheless were among the most accurately made classifications, as judged by concordance between lay interviewers and psychiatrists. In another study (Robins et al. 1982), lay interviewers performed as well as psychiatrists in the identification of both alcohol and drug abuse-dependence. With the publication of the revised version of DSM (American Psychiatric Association 1987), major changes were made to the DIS as well (Robins et al. 1989b).

The drug dependence section of the DIS (Version III-R) consists of approximately 20 questions that conform to the DSM-III-R criteria for drug and alcohol use disorders. Ten classes of psychoactive substances are covered. If a given symptom question is answered positively, up to five probe questions can be asked. Specific probes determine whether the symptoms associated with each drug were sufficient to meet diagnostic criteria. The procedure also records the age of onset of each symptom and the recency of each symptom. The length of the interview will vary depending on the number of drugs used more than five times in the client's life. A similar series of 25 questions constitutes the alcohol dependence-abuse section of the DIS.

The DIS can be scored as well as administered manually or by computer to obtain specific drug abuse and drug dependence diagnoses in DSM-III-R. It also provides discrimination between "probable" and "definite" diagnoses when the Research Diagnostic Criteria and Renard scorings systems are used.

Two related diagnostic instrument packages, developed under the sponsorship of the WHO, are worthy of note, particularly in relation to cross-national research. These instruments are aimed at the measurement and classification of psychiatric disorders, including substance use disorders. The goal is to diagnose psychopathology consistently and accurately across nations, regions, and cultures. The CIDI is based on the Diagnostic Interview Schedule, modified for international use (Robins et al. 1988). The CIDI is sufficiently comprehensive to provide ICD-10 and DSM-III-R diagnoses. Preliminary field studies indicate that it is reliable and practical enough to be used by trained lay interviewers.

SCAN is another instrument developed by WHO. It is designed to meet the need for a comprehensive procedure for clinical examination that is also capable of generating ICD and DSM diagnoses, including substance use disorders (Wing et al. 1990). The interview is based on clinical "cross-examination," with the aim of discovering whether each symptom is present and, if so, with what degree of severity. For most symptoms, a form of questioning is suggested, although the interviewer is free to depart from this if clinical judgment is preferred.

Differential Assessment

Differential assessment refers to the detailed evaluation of the client's substance use disorder in terms of etiology, presenting symptoms, substance abuse patterns, substance-related problems, and other associated features. A variety of purposes can be served by differential assessment. First, differential assessment is the *modus operandi* of disease epidemiology, the science that attempts to explain the underlying causes of a disorder. Second, differential assessment of substance use patterns can be an important focus of other types of research, such as treatment evaluation studies (Tims and Ludford 1984; Institute of Medicine 1990; Gerstein and Harwood 1990), drug self-administration research (Krasnegor 1978), or behavioral pharmacology investigations where a detailed history of the patient's substance use can serve both as a baseline and a predictor of future behavior. Finally, differential assessment is crucial to individualized treatment planning, especially in light of the increasing importance of behavioral and motivational therapies. Here a careful evaluation of the antecedents and reinforcing consequences of drug use is required before treatment can proceed. Such information may also motivate the client to pursue treatment.

To a great extent, the selection of an assessment instrument will depend on the characteristics of the clients and the needs of the evaluator. Table 1 provides a list of substance use variables that should be considered in any comprehensive assessment battery designed for the differential assessment and outcome evaluation of clients in drug treatment programs. Those indicated with an asterisk (*) are considered minimal or core criteria. By using a combination of interviews and questionnaire instruments, these data could be collected in several 1-hour sessions. Although most of these variables can be assessed only by self-report procedures, some variables can be measured by laboratory tests, physical examinations, clinical ratings, or collateral informants. These alternative sources of data should not be neglected, since they provide corroboration, validation, and in some cases completely new sources of information.

The client's global problem severity, reflected in such Group I measures as the Addiction Severity Index composite ratings or DIS drug dependence symptom counts, provides a rough estimate of the client's cumulative drug use history and often can be a good predictor of treatment outcome. Similarly, substance use career variables (Group II), such as the initiation sequence, lifetime consumption, duration of drug use, and treatment history, are primary measures of chronicity. Group III summarizes variables pertaining to the severity of substance-related presenting symptoms. With the increasing trend toward polydrug use and drug substitution (Gardner 1981; Rounsaville et al. 1983), it is imperative to assess both alcohol and drug use patterns singly and in combination.

In addition to the obvious importance of the quantity, frequency, and mode of drug administration, there is now increasing interest in the measurement of the drug dependence syndrome (Edwards et al. 1981), both at the level of neuroadaptation (tolerance and withdrawal symptoms) and at the broader levels of cognition (e.g., craving) and behavior (e.g., pathological pattern of use). Modeled after Edwards' earlier formulation of the alcohol dependence syndrome (Edwards et al. 1976), the drug dependence syndrome concept (Edwards et al. 1981) has provided an important theoretical basis for revisions in the drug and alcohol dependence sections of DSM-III-R and the ICD-10 (Babor 1991).

In addition to the drug use pattern and severity of dependence, differential assessment should include a description of the social and physical environmental stimuli related to substance use, as well as its negative and positive consequences. Table 2 describes the substance use content areas covered by a variety of interviews and self-report questionnaires. These have been developed by researchers and clinicians for the differential assessment of clients in clinical settings. The following paragraphs provide some background about the development and applications of each of these instruments.

The Personal Experience Inventory

The Personal Experience Inventory (PEI) (Henly and Winters 1988; Winters and Henly 1987) is a 300-item paper-and-pencil questionnaire that assesses two broad content areas:

- problem severity, symptoms, consequences, and patterns of substance use; and
- familial, sociodemographic, intrapersonal, social, and environmental influences.

The PEI is one of the few adolescent-specific instruments designed to identify and measure multiple dimensions of substance-related problems. Like the POSIT, it is intended to serve as one component of a more comprehensive assessment process. The first section, problem severity, contains 153 questions that are combined into 10 primary scales and 3 validity indices designed to determine the frequency, degree, duration, and age of onset of drug use, as well as perceived benefits and effects of use. The second part measures psychosocial variables. This section has 147 items, 12 scales, 5 problem screens, and 2 validity indices. These scales are designed to measure personal or environmental factors associated with the initiation and maintenance of alcohol and drug use. The PEI can be computer scored by the test vendor who provides a report that includes standardized scale scores (T-scores and percentiles), graphic displays, and an interpretation of the scales. Although the scores do not provide formal diagnoses, they can be

Table 1. Core variables for assessment of drug and alcohol history, patterns, and problems

Group I.	Variables reflecting lifetime involvement with alcohol and drugs and global problem severity (e.g., ASI alcohol/drug severity ratings, total MAST score, and DSM-III-DIS drug/alcohol symptom counts).
Group II.	Developmental, etiological, and drug use career variables. Age sequence of significant life events in drug and alcohol misuse career (e.g., age of first use, first problems, first dependence, first treatment, etc.)* Number and type of previous treatments for drug/alcohol abuse*
Group III.	Variables related to the severity of presenting symptoms and the nature and patterning of drug abuse Biological test results (e.g., liver function tests, blood alcohol level, urine screening)* Medication use during withdrawal Ratings of withdrawal severity Recent withdrawal symptoms: affective, physiological* Severity of dependence (recent episode, most severe episode for each drug of abuse), including tolerance, withdrawal, craving, or compulsive drug-taking behaviors in relation to common drugs,* alcohol,* and tobacco* Drug use pattern, including recent and past quantity, and frequency and variability of using psychoactive drugs, alcohol and tobacco* Polydrug use patterns and substitution* Drug use contexts, social supports, expectancies, reasons for use, reasons for nonuse, alternative reinforcements Problems related to drug/alcohol use (social, economic, legal, etc.)*

* Minimum research criteria and core variables.

Table 2. Compendium of content areas covered by representative instruments designed for the differential assessment of persons with substance use disorders

Content Area	**ASI**	**DARP**	**TOPS**	**CCAP**	**CIDI-SAM**	**DAF**	**AUI**	**ADS**	**RAND**	**PEI**	**IDS**
Global severity	D,A	--	D	--	D,A	--	A	--	--	S	--
Age sequence	--	D,A	D	D,A	D,A	D,A	D,A	--	--	--	--
Lifetime consumption	--	--	D	--	--	D,A	--	--	--	D,A	--
Lifetime duration of use	D,A	D,A	D	D,A	--	D,A	A	--	A	D,A	--
Recent consumption	D,A	D,A	D,A	D,A	D,A	D,A	A,D	--	A	D,A	--
Treatment history	D,A	D,A	D,A	D,A	--	D,A	A	--	A	--	--
Withdrawal severity	--	D	--	--	D,A	?	A	A	A	--	--
Dependence severity	--	--	--	--	D,A	D,A	A	A	A	--	--
Substance use pattern	--	D	D	--	--	D,A	A	--	A	S	--
Polydrug use	D,A	D,A	D	--	D,A	D,A	--	--	--	D,A	--
Contexts	--	D	--	D	--	--	A	--	A	S	A
Environmental supports	--	D	--	D	--	--	A	--	--	S	A
Reasons for use	--	D	--	D	--	D,A	A	--	A	S	--
Reasons for nonuse	--	D	--	D	--	--	--	--	A	--	--
Substance-related problems	--	--	D,A	D	D,A	D	A	--	A	S	--

A = Alcohol D = Drugs S = All psychoactive substances.

compared with results obtained from both clinical and nonclinical normative samples.

Addiction Severity Index

The Addiction Severity Index (ASI) is a 147-item structured interview designed for use in clinical settings with patients having problems related to their abuse of drugs or alcohol (McLellan et al. 1988; McLellan et al. 1990). Information obtained from the ASI produces a quantitative problem severity profile that describes the patient's relative status in the following treatment-related problem areas: drug abuse, alcohol abuse, medical status, psychological adjustment, legal problems, family-social relations, and employment-financial support. Individual items, severity ratings, and composite scores can be used for the assessment of patients at intake to treatment and at various followup intervals. A recent revision of the ASI has added questions to the section dealing with drug and alcohol use (McLellan et al. 1990). The interviewer is asked to code the usual and most recent route of drug administration and to specify the major drug of abuse.

Research (McLellan et al. 1988) suggests that this information can be useful in assigning patients to appropriate treatment modalities, projecting optimal length of stay, and predicting treatment response based on psychiatric severity. The variety of information obtained about current and lifetime drug and alcohol use makes the ASI an efficient procedure for gathering the minimum amount of drug and alcohol history data required for clinical and research purposes.

The full ASI can be administered by a trained technician in approximately 40 minutes. Detailed users' manuals for the standard version (McLellan et al. 1988) and the revised version (McLellan et al. 1990) explain training procedures, scoring, and applications. Like the other ASI sections, the 27 items that pertain to drug and alcohol use provide three kinds of information. First, objective self-report questions are asked about the client's recent (last 30 days) and lifetime use of alcohol and various drugs, last period of abstinence, times treated for both alcohol and drug abuse, number of days in treatment in the last month, money spent on alcohol and drugs in the last month, and number of days experiencing alcohol or drug problems in the last month. Second, the client is asked to provide, on a 5-point scale, a subjective rating of the extent to which he or she has been "troubled or bothered" by alcohol or drug problems in the past month and the importance of treatment for these problems at the present time. Finally, the objective and subjective information is synthesized by the interviewer into a severity rating that represents an estimate of the client's "need for additional treatment" in the areas of drug and alcohol abuse. In addition to the global severity ratings, a scoring procedure based on the objective drug and alcohol use data has been developed to provide a composite measure of problem severity at intake and followup.

In summary, the drug and alcohol sections of the ASI provide both objective self-report information and clinical ratings pertaining to the severity of the client's substance use disorder. Because of the careful validation work conducted over the past decade, this instrument is likely to provide useful data for treatment planning and evaluation. Nevertheless, the alcohol and drug use questions of the ASI should be considered only a first step in the development of a comprehensive evaluation of the client's drug and alcohol history. It should be noted, for example, that the "addiction" severity implied in the alcohol and drug profile is *not* based on a systematic assessment of the client's dependence history or symptoms. Further, the problem areas assessed do not distinguish between substance-related problems and problems resulting from other conditions or life circumstances. Other instruments should be considered when more precise information is desired.

Drug Abuse Reporting Program

The Drug Abuse Reporting Program (DARP) has developed a set of interviews for use in various long-term followup studies of treated opiate addicts (Simpson and Lloyd 1979; Simpson et al. 1982). Of the three major interview schedules employed in this extensive study of more than 44,000 clients, the 12-year Followup Survey (Cohort III) is clearly the most comprehensive and sophisticated. Although it is one of the better instruments for research purposes, the interview's length and complexity preclude its use with other than trained interviewers and motivated respondents. The 12-year followup instrument contains many of the same features of earlier DARP followup interviews. In addition, it concentrates on supplementary historical information that should prove to be extremely useful in the investigation of etiological factors. Approximately one-half of the questions deal with the drug and alcohol use variables outlined in table 1.

Part 1 covers recent drug and alcohol use and provides a detailed treatment history of the previous year. The number of days the client has experienced alcohol-related dependence symptoms is also recorded. Part II provides a detailed chronology of the client's developmental sequence of drug and alcohol use. It also covers the perceived influence of peers and siblings. In Part III, the interviewer records the client's reasons for starting, cutting down, and returning to drugs, as well as reasons for maintaining addiction and seeking treatment. In this section, the interviewer also inquires about the addict's source of supply, longest periods of abstinence, patterns of polydrug use, number and nature of drug overdoses, and lifetime drug treatment history. Part V deals with reasons for quitting, patterns of alcohol and drug substitution when not using opiates, the perceived role of treatment in the maintenance of abstinence, typical withdrawal symptoms and craving, the consequences of "chipping," and the importance of various nontreatment variables. Results of the 12-year followup evaluation based on this instrument are reported in Simpson et al. (1986). This instrument provides one of the most detailed descriptions of the opiate addict's phenomenology and drug use career and is therefore highly recommended for research purposes.

Treatment Outcome Prospective Study

The Treatment Outcome Prospective Study (TOPS) is a longitudinal investigation of more than 12,000 drug abuse clients treated in various inpatient and outpatient facilities in 10 cities. Funded jointly by NIDA and the National Institute of Justice, TOPS was designed to provide descriptive data about the substance use patterns and legal careers of drug users who received services at federally funded treatment programs between 1979 and 1981 (Bray et al. 1981; Hubbard et al. 1989). Data obtained from this study were used to predict and monitor changes in major types of outcome behaviors, including drug and alcohol use, criminality, and substance-related problems. Data were collected by means of six separate but complementary interview schedules that focused on the following periods: intake to treatment, 1 month into treatment, 3 months into treatment, 3 months followup subsequent to discharge, 12-month followup, and long-term (24-month) followup (Research Triangle Institute 1982). As in the DARP study, considerable attention was given to the evaluation of reliability and validity (Hubbard et al. 1984). The TOPS investigators also developed data collection procedures to evaluate the contributions of different treatment process variables (Research Triangle Institute 1982). The interviews developed for use in the TOPS study are logically organized, sequentially integrated, and precoded for computer analysis. Interviewers need to receive formal training in order to achieve suitable levels of reliability. Computer scoring of the interview data requires use of special Statistical Analysis System (SAS) programs developed by the TOPS researchers.

As summarized in table 2, a variety of content areas related to drug and alcohol use are covered in the TOPS instruments. TOPS is particularly strong with respect to the developmental sequence of substance use, problems related directly to drug and alcohol use, and treatment history. A common reporting "window" of the 3-month period prior to each interview makes possible the direct comparison of intake and followup information. A sequel to TOPS, called the Drug Abuse Treatment Outcome Study (DATOS), employs many of the same interview schedules, which are supplemented by more detailed assessments in new areas like diagnostic classification.

Data Acquisition Form

The Data Acquisition Form (DAF) is a structured interview designed to examine substance abuse patterns, including both sequential and concurrent multiple substance abuse. It was developed for use by the National Drug/Alcohol Collaborative Project (NDACP), a program of descriptive research designed to investigate patterns and prevalence of mixed (alcohol and drug) substance abuse among clients at a large number of treatment facilities (Gardner 1981). It also has been adapted for use as a treatment outcome assessment. The DAF contains 330 questions, of which 75 percent pertain to substance use history and previous treatment experiences (see table 2). The time required to administer the questionnaire ranges from an hour to 90 minutes, depending on the extent of substance involvement reported by the respondent. The DAF is more inclusive than most instruments designed to collect data on substance abuse. Respondents are asked about 14 specific substance categories, as well as alcohol, tobacco, and caffeine. The DAF focuses on each substance sequentially rather than on events related to any or all substances. Asking the same set of questions for all substance categories allows respondents, as well as the researcher or clinician, to examine how the abuse of one substance relates to the abuse of other substances. Finally, the DAF specifically elicits information about the motivation underlying concurrent multiple substance use.

California Civil Addict Program

These interview schedules were developed specifically for the evaluation of the California Civil Addict Program (CCAP) by researchers at the University of California, Los Angeles (McGlothlin et al. 1977). The major objective of this study was to obtain quantitative retrospective data on drug use, employment, and illicit behavior as a function of legal status. Like the TOPS study, the CCAP interview is particularly strong in areas related to illegal activity. But while the TOPS interviews are designed for a prospective research design, the CCAP utilizes a retrospective format.

The interview schedule consists of four parts. Part I is designed to obtain general background information, as well as summary data on alcohol and drug use. It also yields detailed information on employment and illicit activities during the year prior to the first use of narcotic drugs. In Part II, used for noninstitutionalized periods, one records the respondent's legal supervisory status, frequency and cost of narcotic use, drug-selling activities, daily nonnarcotic drug use, drug treatment, alcohol use, employment and earnings, illicit activities, and other sources of income. Part III, completed for institutionalized periods, covers the type and circumstances of incarceration and any drug use while incarcerated. Part IV focuses on the respondent's evaluation of previous treatment in the Civil Addict Program. The main portion of the interview consists of the repeated administration of Parts II and III, which thereby provides a longitudinal description from the time of first narcotic use until the time of the interview.

Alcohol Use Inventory

The Alcohol Use Inventory (AUI) is a 228-item self-report questionnaire that can be administered individually or in groups. Developed out of a long tradition of factor analytic studies of hospitalized alcoholics (Wanberg et al. 1977) the AUI produces an MMPI-type profile that describes the patient's relative position on 17 first-order scales, 6 second-order scales, and 1 broad third-level scale. The first-order scales are:

- social-benefit drinking;
- mental-benefit drinking;
- gregarious drinking style;
- obsessive-compulsive drinking;
- sustained-pattern drinking;
- postdrinking worry, guilt, fear;
- drinking to change mood;
- prior use of external help to stop;
- loss of control when drinking;
- social role maladaptation;
- psychoperceptual withdrawal (DTs);
- psychophysical withdrawal (hangover);
- readiness for help;
- daily quantity of drinking;
- drinking following marital problems;
- drinking provokes marital conflict; and
- awareness of a drinking problem.

A single third-order scale, general alcoholism, also can be scored according to procedures described in a user's manual available from National Computer Systems (Horn et al. 1987). Although drugs other than alcohol are not a major focus of the instrument, the latest version of the AUI (Horn et al. 1987) includes questions about the frequency of use of various drugs. Because the AUI has been used extensively in research and treatment evaluation, a large amount of normative data exist. Nevertheless, the AUI is not well suited to serve as a baseline for followup evaluation, since most of the questions are not phrased within a specific recent time frame.

Alcohol Dependence Scale and Related Assessments

The Alcohol Dependence Scale (ADS) was constructed from items taken from the AUI. A factor analytic study identified a general cluster resembling the alcohol dependence syndrome postulated by Edwards and colleagues (1976). The salient markers of this factor include loss of behavioral control over drinking, withdrawal symptoms, and obsessive-compulsive drinking style. Validation research conducted by Skinner and colleagues (Skinner and Allen 1982; Skinner and Horn 1984) indicates that the ADS correlates in predictable ways with clinic attendance, physical symptoms, and psychosocial problems. Although additional validation research is required, the ADS may be useful for the assessment of the severity of alcohol dependence in drug abuse clients, as well as the determination of treatment goals regarding alcohol use. Persons scoring in the low to moderate range of dependence may be appropriate candidates for brief intervention programs. Clients scoring in the range of substantial or severe dependence should be encouraged to seek treatment and maintain total abstinence from alcohol.

Research on the alcohol dependence concept has fostered interest in the measurement of hypothetical drug dependence syndromes by using similar diagnostic criteria (Edwards et al. 1981). At this writing, several instruments have been developed for research (Robins et al. 1989b) and several validation studies have been reported in the literature (Kosten et al. 1987; Bryant et al. 1992).

RAND Instruments

In addition to the Alcohol Use Inventory, researchers and clinicians interested in an equally comprehensive evaluation of the client's alcohol history should review the instruments developed for use in what are commonly referred to as the RAND studies (Armor et al. 1978; Polich et al. 1981). These interviews include:

- the *Client Intake Form*, which assesses drinking history, previous alcoholism treatment, drinking contexts, quantity and frequency of consumption, recent dependence symptoms, alcohol-related problems, and alcohol-related self-perceptions;
- the *ATC 18-month Follow-up Study Questionnaire*, used in an outcome study of clients treated at eight centers; and
- the *ATC Four-year Follow-up Study Client Interview Form*, which provides complementary assessments of most variables measured at intake. The RAND instruments yield a variety of useful composite measures that have established reliability and validity.

The Inventory of Drinking Situations

The Inventory of Drinking Situations (IDS) is designed to assess high-risk drinking situations in which the client drank heavily over the past year (Annis et al. 1987). The IDS measures two major classes of high-risk drinking situations:

- intrapersonal determinants of drinking, such as psychological and physical cues; and
- interpersonal determinants, such as the influence of other individuals.

Details concerning subscale reliabilities, normative data, and the derivation of a 42-item short form are given in Annis et al. (1987). It is suggested that the microanalysis of risk situations provided by the ADS can be useful in designing general program components suited to the needs of different types of problem drinkers.

Relapse prevention theory implies that efficacy expectations are intimately related to high-risk drinking situations. A complementary instrument, the *Situational Confidence Questionnaire (SCQ)*, is designed to measure the client's relative confidence (or self-efficacy) with respect to coping with the different types of drinking situations measured in the IDS (Annis and Graham 1988). Together, these instruments provide a profile of the situations and efficacy expectations needed to guide the development of an individualized relapse prevention plan for clients having a recent history of alcohol abuse.

Composite International Diagnostic Interview - Substance Abuse Module

The Composite International Diagnostic Interview - Substance Abuse Module (CIDI-SAM) is a fully structured interview that ascertains DSM-III-R, Feighner, Research Diagnostic Criteria (RDC), and ICD-10 diagnoses for tobacco, alcohol, and nine classes of psychoactive drugs (Cottler et al. 1989; Robins et al. 1989a). It was designed at the request of the

WHO/ADAMHA Task Force on Psychiatric Assessment to expand the substance use disorders sections of the CIDI. Like the CIDI, the CIDI-SAM can be used to make lifetime as well as cross-sectional diagnoses. The latter requires that all criteria be met within a recent period, such as the last year. The SAM is much more comprehensive than the drug and alcohol sections of the CIDI. It differs from the CIDI in the following ways:

- it divides questions pertaining to opiates into two classes: heroin and other opiates;
- the maximum duration of withdrawal symptoms is ascertained for each class of psychoactive substances;
- medical, psychological, and social consequences of using each type of substance are ascertained, thereby permitting the comparison of substances with respect to their specific effects;
- for each drug, questions are asked about the age of first regular use, periods of abstention, and maximum amounts used on one occasion.

Conclusion

Screening, diagnosis, and differential assessment are complementary aspects of client evaluation for treatment planning or clinical research. In this chapter, we have reviewed core variables, minimal criteria, and assessment instruments designed to focus on the client's history and pattern of substance use. Although a number of excellent research instruments have been developed for this purpose, each has its own particular strengths and weaknesses, depending on the interests of the evaluator and the goals of assessment. No instrument is ideally suited to all the potential needs of researchers and clinicians in the substance abuse field. Choice of an instrument should be guided by the instrument's known reliability and validity; the training required to use the instrument; the time and effort required to collect the data; the type of subject or client likely to be evaluated; the need for followup measures; the distributional properties of the raw data; and the instrument's ease of scoring, amenability to statistical analysis, and the clarity of interpretation.

Some instruments (e.g., DIS and ASI) are best employed in their entirety, while others, because of their specific focus (e.g., ADS or MAST) or compartmentalization (e.g., AUI) are best combined with other instruments in a mixed battery. The DIS and ASI complement each other well by providing a broad description of the client's psychopathology, drug and alcohol use, and psychosocial adjustment. They are equally suitable to both research and clinical practice. To the extent that the drug-abusing client also requires treatment for alcohol abuse, the clinical assessment instruments (ADS, IDS, and SCQ) reviewed here are highly recommended. Instruments designed primarily for research purposes should be selected on the basis of their ability to measure variables of theoretical interest. The DARP, TOPS, and DAF interviews are recommended to researchers interested in drug use careers, illegal behaviors, and polydrug use patterns. By referring to the summary information in table 2 of this chapter, the reader should be able to make an intelligent choice about which drug and alcohol assessments best suit his or her needs.

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Chapter IV
ASSESSMENT OF MEDICAL HISTORY, HEALTH STATUS, INTOXICATION, AND WITHDRAWAL

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Introduction

The number of research and clinical studies on substance abuse problems is increasing rapidly. Yet, a review of the current literature reveals no consistent approach to gathering the information necessary for a comprehensive evaluation of a patient's health history and physical status. In most cases, the paucity and variability of existing information make it difficult to draw conclusions from many studies and to compare findings between studies. Many of the problems noted in the literature are secondary to the lack of standardized baseline medical information. A cursory screening of medical data is not satisfactory, since medical problems can have a profound effect on psychological state, mood, drugs of all types, and various treatment approaches. It therefore becomes necessary to define a standardized assessment of health history and health status for use in research and clinical studies of substance abusers. The availability of instruments used by the majority of investigators in the field will provide a standard baseline of information facilitating comparisons of data from one study to another.

Available health status inventories have been reviewed, and those with greatest validity, reliability, and sensitivity were chosen for discussion in this paper. Where no adequate instrument was available, modifications of existing inventories are recommended or new instruments have been developed. From these resources, a standardized health history and health status data base for use in substance abuse research and clinical studies can be compiled. Specific recommendations will be made for the evaluation of the health of a general subject group and on instruments to be used in the collection of the data. In the first section we discuss medical history, and in the second section we discuss current health and intoxication and withdrawal status.

Medical History

Obtaining a medical history is the first and often the most important step in the evaluation of a person's health, whether that person is seriously ill or an apparently healthy volunteer for a study. The medical history provides a data base consisting of the personal health information that the patient is able to report. This data base can be maximized and standardized by the use of a health history questionnaire, several of which have been widely used in the past (Brodman et al. 1949; Collen et al. 1969; Hershberg et al. 1971; Pecoraro et al. 1979).

Interestingly, most of the research focusing on self reported medical history appears to have taken place prior to 1980. During the last decade, the field of health status assessment has broadened to encompass function and quality of life concepts, or "sociomedical" health indicators (McDowell and Newell 1987). These instruments assess the impact of patient health on functions such as mobility, physical activity, and social activity. Current research issues in health status assessment are concerned with the efficacy of generic versus disease-specific instruments, the use of a single instrument versus a battery of measures, standardization, and interpretation of health scores (Bergner 1989; Lohr 1989; Patrick and Deyo 1989). These health status assessment efforts reflect current policy-related concerns regarding the cost utility and cost effectiveness of health care programs (Steinwachs 1989; Ware et al. 1981), as well as health care planning and clinical-treatment evaluation (Bergner 1989).

Unfortunately, the burgeoning of quality-of-life research in health status has overshadowed the continuing need for valid and reliable measures focusing on medical history. Not all clinical and research purposes call for the measurement of impact on functioning and other quality-of-life concepts. Nelson and Berwick (1989) provide an excellent summary of health status assessments with acceptable reliability and validity that are appropriate for use in clinical practice. Although some of these measures include a medical symptom subscale, such scales are usually relatively brief and less than comprehensive to keep the length of the total instrument reasonable.

For example, the Nottingham Health Profile (Hunt et al. 1985) measures health problems and areas of life most often affected by health. Health problems are measured by 38 items assessing 6 areas: physical function, mobility, energy, pain, emotional reactions, and social isolation. Similarly, the Duke-UNC Health Profile (Parkerson et al. 1981) provides a symptom index consisting of 28 items, while also providing indices of physical function, emotional function, and social function. And the Short Form General Health Survey (Stewart et al. 1988) consists of 20 items assessing physical and mental health, social role, health perception, and pain. In contrast, the Cornell Medical Index, first cited in 1951, consists of 195 items assessing all organ systems, family history, and behavior. This comprehensiveness reflects the purpose of the instrument, which was developed to correspond to a detailed, comprehensive medical interview.

Little can be found in the current literature regarding health history assessment, and virtually nothing exists regarding medical history assessment in substance abuse populations. The need for standardized assessment instruments is of particular importance in substance abuse research, since medical problems can profoundly influence the effect of all types of drugs, the patient's psychological functioning, and the treatment approaches and outcome.

For the purposes of treating and studying a substance-abusing population, a broad range of medical information should be obtained. Table 1 provides an example of this type of medical data base.

Current symptoms of disease provide information and indicate areas that will require further evaluation in order to arrive at a diagnosis of a disease that may influence the outcome of the study. For research and evaluation, the information will also provide a baseline for comparison with a posttreatment state. Along with current symptoms, any known current medical conditions as well as current treatments should be noted and confirmed.

Table 1. Medical history data base

Current physical symptoms
Current known/active medical conditions/diagnoses
Prescription, over-the-counter, and illicit drug use
Allergies
Past medical history
Family medical history
Family substance abuse history
Health care utilization patterns

When making inquires about the use of drugs, great care should be taken to include all classes of prescription drugs, whether prescribed or not, over-the-counter medications, and illicit substances. Information about any drugs being used should include the name, dose being taken, route of administration, frequency of use, duration of use, and date of last use. This will establish the potential for drug interactions and adverse side effects. The more specific the questions, the more likely accurate information will be obtained.

The past medical history should include information about prior medical illnesses and treatments, including operations and hospitalizations, immunization history, and a record of past abnormal tests such as the electrocardiogram, chest x-ray, human immunodeficiency virus (HIV) test, liver function tests (LFT), and tuberculin skin test.

In order to demonstrate the efficacy of a specific treatment, it may be important to demonstrate the impact of treatment on indirect measures like health care utilization. Therefore, the data base should provide a record of both outpatient and inpatient medical treatment during the preceding 5 years. This should include information on all medical, psychiatric, and chemical dependency treatments.

A thorough family medical history may alert the clinician to special risk factors present in a given subject. These risk factors may become manifest during long-term followup and could influence outcome if they have not been identified at the time the subject was enrolled in the study.

It is also important to include any family history of substance abuse as well. A positive family history can contribute to both diagnostic and treatment decisions.

Information collected during a complete medical history could suggest areas requiring more intensive evaluation and also offer a clue to medical diagnoses. To assure that all necessary information is collected, a complete review of systems provides an important baseline for comparison with a post-study or treatment state.

To facilitate the collection of the information described above, a variety of instruments for the collection of medical history data have been reviewed (Brodman et al. 1949; Collen et al. 1969; Gumpel and Mason 1974; Hershberg et al. 1971; Hunt et al. 1985; Parkerson et al. 1981; Pecoraro et al. 1979; Stewart et al. 1988). Validity, reliability, and comprehensiveness, as well as ease of administration and suitability for the substance-abusing population, were compared.

Validity reflects the ability of the instrument to determine the presence of the disease or symptoms in questions. The more sensitive the test is, the more likely it is to identify the presence of a given disease or symptom, but the more sensitive tests may also have a large number of false positive results. The specificity of an instrument is its ability to exclude false positives and negatives. In practice, the validity of health history questionnaires has been determined only in a relative way. The extent to which answers obtained on the questionnaire match answers to the same question obtained by physicians in face-to-face interviews has been used to determine validity. Therefore, a question about the occurrence of chest pain is considered valid if a physician interviewer obtains the same answer, but in neither case is the presence or absence of chest pain absolutely determined. Reliability refers to the test-retest consistency of an instrument, and comprehensiveness reflects the ability of the instrument to obtain all the information needed by clinicians and researchers.

Having considered a number of currently available instruments, we recommend the standard Cornell Medical Index (CMI) (Brodman et al. 1949), with a supplemental sheet (exhibit 1) for data collection by researchers and clinicians working with substance abuse populations.

The CMI is a 195-item, self-administered health history questionnaire. Present symptoms, past illnesses, and family history are reviewed in 18 subsections which cover all organ systems and several psychological areas. A supplemental sheet containing questions on current and past medical care utilization, prescription, over-the-counter, and illicit drug use, and several other areas has been added, since these important areas are not covered by the CMI. Separate CMI forms are available for men and women; these are identical except for 6 questions in the genitourinary section. The form usually takes less than 30 minutes to complete and requires no special instructions or equipment for administration so long as the subject can read.

Exhibit 1. Supplement to CMI

Are you on any special diet? Yes ___ No ___

Are you seeing a doctor or being treated for any illness now? (please list)

Are you taking any illicit drugs (narcotics, tranquilizers (downers), cocaine, amphetamines (speed), marijuana, LSD)?

Are you taking any medications prescribed by a doctor now? (please list)

Are you taking any other pills or medication (over-the-counter or nonprescription, such as laxatives, vitamins, antacids, cold remedies) now? (please list)

Please list all your hospitalizations:

Hospital ________________ Year _____ Type of illness or operation ____________

What year was your last tetanus (lockjaw) shot? _____ Don't know___

What year was your last chest x-ray? _____ Don't know___

Was there anything abnormal? ___ Don't know ___

Have you ever had a TB (tuberculin) test? Yes ___ No ___ Don't know ___

Have you ever been tested for AIDS or HIV? Yes ___ No ___ Don't know ___

How many times have you been a patient in a hospital (admitted at least overnight) in the past year? ______ 5 years? ______

How many times have you been treated in an emergency room? ______

How many times have you seen a doctor in an office or clinic? in past year ___ 5 years ___

The CMI has been shown to be useful as an index of general health status (Abramson et al. 1965; Abramson 1966; Weaver et al. 1980) and mental health status (Abramson 1966; Costa and McCrae 1977; Stefansson and Kristjansson 1985) and may provide a guide to the need for medical intervention (Dudley 1976). It has an advantage over other instruments because of the availability of normative data (Costa and McCrae 1977; Seymour 1976), as well as cross-cultural and ethnic data (Abramson et al. 1965; Weaver et al. 1980). It is the only instrument which has seen much use with the substance-abusing population (Dudley 1976; Norton et al. 1977). In addition, it has been included as a standard for determining the validity of other instruments such as the Addiction Severity Index (McLellan et al. 1988) and General Health Questionnaire (Stefansson and Kristjansson 1985).

It is important to keep in mind that the CMI should not be used for the diagnosis of specific diseases (Abramson et al. 1965; Abramson 1966; Norton et al. 1977; Weaver et al. 1980). A list of symptoms can be obtained which may alert the physician or researcher to the potential presence of disease. The symptoms are useful to guide physicians in their examination of patients and in their selection of diagnostic tests. However, the ultimate determination of disease is several diagnostic steps removed from the initial outline of symptoms obtained by interview or health history assessment. Since symptoms constitute the patient's sense of his or her own illness or health, they provide a measure by which the physician can gauge the success of treatment. Because symptoms largely determine the quality and productivity of life, they are an important factor in the design and interpretation of drug treatment studies. The health history assessment serves as an instrument for recording symptoms and complaints in a standard and, more importantly, replicable way.

Although cross-cultural data are available for the CMI, it has not been demonstrated to be useful for comparing different cultural or ethnic groups (Abramson et al. 1965); further, comparisons between any two groups should be made with caution. In addition, age, sex, and social class have been shown to influence CMI scores.

Despite the limitations described, the CMI—of all the instruments reviewed—appears to be one of the most widely studied and useful medical history assessments currently available.

The information collected can be used not only to create a baseline of data but also to assist in screening for persons who will require a more intensive medical evaluation.

Current Health Status

The extent of the current health assessment depends upon the purpose of the clinician or researcher. An evaluation could be limited to a self-report health history assessment like the CMI recommended above or could include a full physical examination, with the related battery of diagnostic tests, and a quality-of-life assessment.

Because the medical complications of drug abuse are many, the purpose of a medical evaluation might be to fully diagnose and subsequently treat any medical disorder that appears in the patient's record. Beginning with a standard medical history and physical examination, data collection would continue through laboratory and other specialized diagnostic testing until a diagnosis was reached. The resulting data base would be very much tailored to the individual patient and the disease under investigation. For a narrower aim, such as the inclusion or exclusion from a research project, the identification of disease or abnormality without the intention of pursuing a full diagnostic assessment would suffice.

It might be the purpose of a medical evaluation to identify only those medical conditions that would exclude a patient from the study. For example, a study in which high-dose stimulants would be administered might exclude patients with heart or thyroid disease. Other drug studies might choose to exclude pregnant women for ethical and medicolegal reasons.

Another purpose for the medical evaluation might be the recognition of illnesses which have the potential to contaminate the experimental observations. If behavioral manifestations of drug abuse are being observed, such as the depressant effects of stimulant withdrawal, then medical conditions which can manifest as depression should be identified. The presence of long-acting drugs like phencyclidine (PCP) is another potentially contaminating variable that should be identified.

Finally, a medical evaluation should be used to establish a physiologic baseline which could be monitored for change over time, with or without a trial intervention. The baseline could be general health status or it could be a very specific function, such as pulmonary function in intravenous (IV) drug abusers.

The health status data base derives from the assessment outlined in table 2.

Table 2. Health status assessment

History (standardized by CMI)
Physical exam
Urinalysis
CBC with differential and indices
Chemistry profile
Hepatitis panel
VDRL (FTA)
HIV test (ELISA, Western Blot, PCR)
PPD
Urine drug screen (TLC or immunoassay +/- GC/MS)
Serum HCG (if female in reproductive years)
Chest x-ray (if age over 40, PPD+, abuse of IV drugs, inhalants, or abnormal pulmonary findings on H&P)
EKG (if age over 40, abuse of stimulants or inhalants, heavy IV drug user, or abnormal cardiac findings on H&P)

Abbreviations: CBC, complete blood count; FTA, fluorescent treponemal antibody; PPD, purified protein derivative; GC, gas chromatography; HCG, human chorionic gonadotropin; H&P, history and physical; EKG, electrocardiogram.

The first procedure is the recording of a comprehensive medical history, standardized by the use of the CMI and supplemental sheet described in the previous section. This is followed by a physical examination. There is no substitute for the physical examination as a method for the recognition and diagnosis of disease. Several investigators have used a health history questionnaire as an adjunct to the physical examination; however, none have found it an accurate diagnostic tool by itself (Hunt et al. 1985; Nelson and Berwick 1989; Ware et al. 1981).

The basic laboratory profile includes a complete blood count with indices and a differential, a serum chemistry profile, a venereal disease research laboratories (VDRL) exam and a hepatitis screen. A tuberculin skin test should be applied after inquiring about tuberculosis exposure of previous reactivity. Since substance abusers, particularly those using intravenous injections, are at high risk for HIV infection, all should be screened by enzyme-linked immunosorbent assay (ELISA) and followed by Western Blot if positive. Polymerase chain reaction (PCR) can also be used. A concentrated morning urine sample should be analyzed for drugs by using a broad screening technique such as thin-layer chromatography (TLC) or immunoassays supplemented by a highly specific technique such as gas chromatography-mass spectrometry.

A serum test for pregnancy in women of reproductive age is recommended.

A chest x-ray should be obtained for patients who are over 40 years of age, are tuberculin skin-test positive, abuse intravenous drugs or inhalants, or have abnormal findings referable to the respiratory system after completion of a history and physical examination.

An electrocardiogram should be obtained for patients who are over 40 years of age; who abuse intravenous drugs, stimulants, or inhalants; or who show cardiac abnormalities on history and physical examination.

Intoxication and Withdrawal Status

Evaluation of drug intoxication or withdrawal occurs within the context of the history, physical examination, and laboratory testing. Assessment of the psychological effects of intoxication is at best subjective. Scales have been developed by the Addiction Research Center for grouping the subjective effects of stimulants, narcotics, sedative-hypnotics, and hallucinogens (Haertzen 1974). However, the only objective way of determining the level of intoxication and the specific intoxicating agent or agents is by measuring serum drug levels. Urine toxicology provides only information that an identified drug has been taken within a specified time period and is not useful for assessing the current level of intoxication. The most effective way of assessing intoxication would include a complete physical examination with neurologic evaluation and a psychological assessment in conjunction with serum drug levels. This is an expensive and time-consuming process that may not be cost-effective except for very specific types of research.

Less objective but nevertheless useful are a set of intoxication and withdrawal scales which can be completed by a trained observer and can be used to standardize intoxication and withdrawal scales for research purposes and clinical monitoring. Subjective withdrawal scales completed by patients have also been developed (Gossop 1990; Bradley et al. 1987; Handelsman et al. 1987). Handelsman and others (1987) support the use of both subjective and objective withdrawal scales, since high subjective complaints can exist in the presence of mild objective signs, and vice versa. We suggest the six intoxication and withdrawal scales shown in exhibits 2 through 8 and described below.

The Subjective Opiate Withdrawal Scale (SOWS) and the Objective Opiate Withdrawal Scale (OOWS) have demonstrated reliability and validity in assessing the opiate withdrawal syndrome (Handelsman et al. 1987). Both are brief and easily completed. The Subjective Opiate Withdrawal Scale (see exhibit 2) consists of 16 symptoms rated in intensity by patients on a 5-point scale. The symptoms cover those common in opiate withdrawal, e.g., musculoskeletal, gastrointestinal, etc. Patients indicate the intensity of each symptom currently being experienced (0=not at all, 1=a little, 2=moderately, 3=quite a bit, 4=extremely). A total score ranging from 0 to 64 is obtained by summing the patient's ratings for each item.

The Objective Opiate Withdrawal Scale (see exhibit 3) is completed by an observer who rates

Exhibit 2. Subjective Opiate Withdrawal Scale (SOWS)

Instructions: Answer the following statements as accurately as you can. Circle the answer that best fits the way you feel now.

1 = Not at all
2 = A little
3 = Moderately
4 = Quite a Bit
5 = Extremely

	Not at All	A Little	Moderately	Quite a Bit	Extremely
1. I feel anxious.	1	2	3	4	5
2. I feel like yawning.	1	2	3	4	5
3. I'm perspiring.	1	2	3	4	5
4. My eyes are tearing.	1	2	3	4	5
5. My nose is running.	1	2	3	4	5
6. I have goose flesh.	1	2	3	4	5
7. I am shaking.	1	2	3	4	5
8. I have hot flashes.	1	2	3	4	5
9. I have cold flashes.	1	2	3	4	5
10. My bones and muscles ache.	1	2	3	4	5
11. I feel restless.	1	2	3	4	5
12. I feel nauseous.	1	2	3	4	5
13. I feel like vomiting.	1	2	3	4	5
14. My muscles twitch.	1	2	3	4	5
15. I have cramps in my stomach.	1	2	3	4	5
16. I feel like shooting up now.	1	2	3	4	5

Exhibit 3. Objective Opiate Withdrawal Scale (OOWS)

Instructions: Rate the patient on the basis of what you observe during a timed 10-minute period.

ITEM	SCORE 1 POINT FOR EACH ITEM IF:	POINTS
1. Yawning	present	______
2. Rhinorrhea	3 or more	______
3. Piloerection (observe pt's arm or chest)	present	______
4. Perspiration	present	______
5. Lacrimation	present	______
6. Mydriasis	present	______
7. Tremors (hands)	present	______
8. Hot and cold flashes (shivering or huddling for warmth)	present	______
9. Restlessness (frequent shifts of position)	present	______
10. Vomiting	present	______
11. Muscle twitches	present	______
12. Abdominal cramps (holding stomach)	present	______
13. Anxiety (Observable manifestations: finger tapping, fidgeting, agitation)	present	______
	TOTAL OOWS SCORE (Sum items 1-13):	______

Exhibit 4. Narcotic intoxication scale

Time: ______

Vital Signs:
Temperature (°C): ______
Respirations (per min): ______
Pulse (per min): ______
Blood Pressure (mmHg): ______
Pupil Size (mm): ______
Weight (kg): ______

Level of Consciousness:* ___________

Signs and Symptoms:**
Nausea: ______
Vomiting: ______
Urinary Retention: ______
Pulmonary Edema: ______
Convulsions: ______

*(alert wakeful, lethargic, obtunded, stuporous, or comatose).
**Graded: 0 = absent; 1 = mild; 2 = severe.

the presence of 13 physically observable signs. A total score is obtained by summing the number of signs that were present during a brief (10-minute) observation period.

Although these two scales have reported utility in assessing the extent of withdrawal at the time of test completion, they were not developed for assessing intoxication. We have developed a narcotic intoxication scale for the assessment and recording of the signs and symptoms of acute or chronic narcotic intoxication (see exhibit 4). This requires monitoring of vital signs and other significant signs or symptoms. The frequency of monitoring varies according to the patient's clinical status.

Exhibit 5 shows a sample sedative-hypnotic withdrawal scale that was developed for assessing alcohol withdrawal. The Clinical Institute Withdrawal Assessment for Alcohol—Revised (CIWA-Ar) (Sullivan et al. 1989) is a shortened version of the widely used Clinical Institute Withdrawal Assessment (Shaw et al. 1981). The CIWA-Ar consists of 10 items for assessing the severity of the alcohol withdrawal syndrome and has demonstrated reliability and validity. An observer rates the intensity of 10 common withdrawal symptoms. A total score is obtained by summing the ratings from the 10 items. This scale also appears to be useful in assessing the withdrawal of other sedative-hypnotics, but it is important to remember that its validation is based on alcohol withdrawal.

We have included in exhibit 6 a complementary sedative-hypnotic intoxication scale using a brief grading system for signs and symptoms that can be observed during intoxication. Signs and symptoms are graded from zero (absent) to one (mild) to two (severe).

A careful review of the literature failed to identify a scale useful in assessing intoxication or withdrawal for stimulant drugs. However, there is a growing need for scales of this type, given the widespread use of cocaine and other stimulants. Therefore, stimulant withdrawal and intoxication scales have been developed (exhibits 7 and 8) based on the clinical experience of the authors. In a style similar to the sedative-hypnotic intoxication scale, a set of signs and symptoms can be scored from zero to two based on presence and severity.

Conclusion

For clinicians and researchers interested in substance abuse problems, procedures and instruments for assessing health history, current health status, intoxication, and withdrawal have been described that can be used to achieve the following goals:

- The identification of medical conditions requiring immediate attention of a diagnostic or therapeutic nature (urgent medical conditions). These include conditions like active hepatitis, Acquired Immunodeficiency Syndrome (AIDS), bacterial endocarditis, and pulmonary infections.
- The identification of a drug intoxication or withdrawal status. Such a condition not only poses a threat to the patient's health but constitutes important data for treatment evaluation.
- The recognition of conditions most common in the drug-abusing population, such as venereal disease, hepatitis, HIV, or other infections. Although some of these diseases are not life-threatening, they occur with such frequency that they have a major impact on the patient's welfare, lifestyle, and health care utilization.
- The identification of medical conditions which would result in exclusion from most studies where an investigational drug is involved. Pregnancy, severe cardiovascular disease, and serious infections are some examples.
- The development of a health status data base that will serve not only as a baseline for clinical study but also for further diagnosis and treatment. The data collected can serve as a basis for comparison with health status after treatment and over time.

Exhibit 5. Addiction Research Foundation Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar)

Patient_____ Date / / / / Time___:___
y d m (24 hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute:______ Blood pressure: ____/____

NAUSEA AND VOMITING—Ask "Do you feel sick to your stomach? Have you vomited?" Observation.

0 no nausea and no vomiting
1 mild nausea with no vomiting
2
3
4 intermittent nausea with dry heaves
5
6
7 constant nausea, frequent dry heaves and vomiting

TREMOR—Arms extended and fingers spread apart. Observation.

0 no tremor
1 not visible, but can be felt fingertip to fingertip
2
3
4 moderate, with patient's arms extended
5
6
7 severe, even with arms not extended

PAROXYSMAL SWEATS—Observation.

0 no sweat visible
1 barely perceptible sweating, palms moist
2
3
4 beads of sweat obvious on forehead
5
6
7 drenching sweats

ANXIETY—Ask "Do you feel nervous?" Observation.

0 no anxiety, at ease
1 mildly anxious
2
3
4 moderately anxious, or guarded, so anxiety is inferred
5
6
7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

---

Exhibit 5. Addiction Research Foundation Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) (continued)

AGITATION—Observation.

0 normal activity
1 somewhat more than normal activity
2
3
4 moderately fidgety and restless
5
6
7 paces back and forth during most of the interview, or constantly thrashes about

---

TACTILE DISTURBANCES—Ask "Have you any itching, pins and needles sensations, any burning, any numbness or do you feel bugs crawling on or under your skin?" Observation.

0 none
1 very mild itching, pins and needles, burning, or numbness
2 mild itching, pins and needles, burning, or numbness
3 moderate itching, pins and needles, burning, or numbness
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

AUDITORY DISTURBANCES—Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.

0 not present
1 very mild harshness or ability to frighten
2 mild harshness or ability to frighten
3 moderate harshness or ability to frighten
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

VISUAL DISTURBANCES—Ask "Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.

0 not present
1 very mild sensitivity
2 mild sensitivity
3 moderate sensitivity
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

Exhibit 5. Addiction Research Foundation Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) (continued)

HEADACHE, FULLNESS IN HEAD—Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.

0	not present
1	very mild
2	mild
3	moderate
4	moderately severe
5	severe
6	very severe
7	extremely severe

ORIENTATION AND CLOUDING OF SENSORIUM—Ask "What day is this? Where are you? Who am I?"

0	oriented and can do serial additions
1	cannot do serial additions or is uncertain about date
2	disoriented for date by no more than 2 calendar days
3	disoriented for date by more than 2 calendar days
4	disoriented for place and/or person

Total CIWA-A Score ____________
Rater's Initials ____________
Maximum Possible Score 67

Exhibit 6. Sedative-hypnotic intoxication scale

Time: _____

Level of Consciousness:* __________

Vital Signs:
Temperature (°C): _____
Respirations (per min): _____
Pulse (per min): _____
Blood Pressure (mmHg): _____
Pupil Size (mm): _____
Weight (kg): _____

Signs and Symptoms:**
Ataxia: _____
Nystagmus: _____
Dysarthria: _____
Dysmetria: _____
Depressed Deep Tendon Reflexes: _____

*(alert wakeful, lethargic, obtunded, stuporous, or comatose).
**Graded: 0 = absent; 1 = mild; 2 = severe.

Exhibit 7. Stimulant withdrawal scale

Time: ______

Vital Signs:
Temperature (°C): ______
Respirations (per min): ______
Pulse (per min): ______
Blood Pressure (mmHg): ______
Pupil Size (mm): ______
Weight (kg): ______

Level of Consciousness:* __________

Signs and Symptoms:**
Hyperactivity: ______
Tremor: ______
Diaphoresis: ______
Irritability: ______
Anorexia: ______
Apathy: ______
Psychomotor Retardation: ______
Depression: ______
Insomnia: ______
Anxiety: ______
Labile Mood: ______
Headache: ______
Nausea: ______
Hyperphagia: ______

---

*(alert wakeful, lethargic, obtunded, stuporous, or comatose).
**Graded: 0 = absent; 1 = mild; 2 = severe.

Exhibit 8. Stimulant intoxication scale

Time: ______

Vital Signs:
Temperature (°C): ______
Respirations (per min): ______
Pulse (per min): ______
Blood Pressure (mmHg): ______
Pupil Size (mm): ______
Weight (kg): ______

Level of Consciousness:* __________

Signs and Symptoms:**
Irritability: ______
Restlessness: ______
Hyperactivity: ______
Tremor: ______
Seizures: ______
Labile Mood: ______
Psychosis/Mania: ______
Delirium: ______
Diaphoresis: ______
Dry Mouth: ______
Anorexia: ______
Formication: ______

---

*(alert wakeful, lethargic, obtunded, stuporous, or comatose).
**Graded: 0 = absent; 1 = mild; 2 = severe.

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Chapter V
PSYCHIATRIC DIAGNOSIS, FAMILY PSYCHIATRIC HISTORY

John E. Helzer, M.D.

Introduction

This chapter deals exclusively with diagnostic instruments based on specified diagnostic criteria. Most of the discussion is devoted to DSM-III-based interviews (American Psychiatric Association 1980). However, instruments based on other diagnostic systems are also covered briefly, including DSM-III-R (American Psychiatric Association 1987); Research Diagnostic Criteria (RDC) (Spitzer et al. 1975); the St. Louis or Renard criteria (Feighner et al. 1972); and, for family diagnoses, the Family History-Research Diagnostic Criteria (Endicott et al. 1975). The discussion encompasses (1) respondent diagnoses and (2) family history and diagnoses.

Respondent Diagnoses

In this section, the discussion concentrates on instruments based on DSM-III, the Renard criteria, and the RDC. Instruments based on DSM-III are emphasized. The decision to focus primarily on instruments based on DSM-III rests on the advantages of this system for research and clinical use, as noted below.

DSM-III: The System and Related Instruments

Because DSM-III is a relatively precise diagnostic system, it is particularly suited to research. Further, its use for research is well established. However, there are at least two disadvantages to its use:

- DSM-III is complex and not necessarily easy to use; and
- it may not yet have had a consistent impact on routine clinical practice (Helzer and Coryell 1983).

DSM-III is a complicated diagnostic system. There are almost 200 adolescent and adult diagnoses, and the criteria for each diagnosis are very detailed. Most definitions of the diagnoses contain both inclusion and exclusion criteria. These criteria elements are grouped into requisite patterns of symptoms; ages of onset and specific time durations of symptoms are included where relevant. Even persons familiar with this system find it nearly impossible to keep all of the elements in mind and to apply the definitions consistently without the aid of some type of structured interview or checklist.

Despite such complexities, there are considerable advantages in using such a highly specific diagnostic system and structured interview based on it. Among these are improved consistency and comparability of data across studies, uniformity and reliability of data within studies, thoroughness and comprehensiveness of the database, and a reduction of examiner bias in the collection and interpretation of information (Helzer 1983).

One potential disadvantage of such precision and comprehensiveness is the amount of time required to make a complete diagnostic evaluation. However, there is evidence that a structured interview, *per se*, does not necessarily entail any great increase in the amount of time required for an evaluation (Helzer 1981). Also, there are ways to shorten the diagnostic evaluation for use in any given study. One way is to be selective in choosing the diagnoses to be assessed. Another is to use a battery of instruments for different purposes. For example, initial assessment might begin with the use of screening instruments. Fully structured interviews can be reserved for evaluating only diagnoses of specific interest, whereas less highly structured interviews and/or symptom checklists can be used when it is sufficient merely to ascertain key symptoms. Or, a two-stage method could be used in which (1) all subjects are given a non-diagnostic checklist and (2) a more extensive and focused examination is given to those subjects with checklist scores above a specified threshold.

Diagnostic Interview Schedule (DIS). The DIS is one of a series of structured diagnostic interviews developed at Washington University in St. Louis (Robins et al. 1981). It was designed originally to serve as the diagnostic instrument for the Epidemiologic Catchment Area (ECA) survey, a general population prevalence, incidence, and health utilization study conducted at five field centers across the United States (Regier et al. 1984). The DIS can be used to ascertain diagnostic information relevant to the RDC, the Renard criteria, and DSM-III; however, it focuses primarily on DSM-III, covering 43 of the DSM-III categories. It is a highly structured interview; every question is fully written out and is read verbatim to the respondent. A structured format—the "Probe Flow Chart"—is used to establish the psychiatric significance of positive symptom responses. Unique codes are provided for subclinical symptom occurrence and for non-psychiatric attributions of symptoms, such as medical illness and substance use. The latter, of course, provides a particularly important distinction in studies of subjects who abuse drugs and alcohol.

The DIS interview is pre-coded for immediate computer entry. A computer algorithm, written in SAS (Statistical Analysis System) (SAS Institute 1982) is applied to the completed interview to generate diagnoses, as well as summary data, including the total number of symptoms, number of diagnoses for which medical attention was sought, positive symptom scores for individual diagnoses, and a global score across all diagnoses.

The DIS elicits information about the lifetime history of psychiatric disturbance, the age of onset of each positive diagnosis, the age of the most recent difficulty, and for episodic syndromes, the duration of the longest episode. The section on drug abuse and dependence covers levels of use and attendant problems for eight categories of drugs: cannabis compounds, amphetamines, barbiturates, tranquilizers, cocaine, heroin, opiates other than heroin, and psychedelics. Space also is provided to code "other" drugs. The use and problem questions include: use five times or more, daily use, feeling dependent, inability to cut down, tolerance, withdrawal symptoms, associated health problems, social problems, legal problems, and emotional problems. As with other symptoms, both "ever in lifetime" and the "most recent" occurrence are ascertained. Similar coverage is obtained for alcohol abuse and dependence.

The DIS is being used for epidemiologic psychiatric research in many locations around the world, including Europe, South America, and Asia. Because it is so highly structured and because every symptom is asked of every respondent, the instrument is well suited to comparative studies of either diagnoses or symptoms. It has become, in fact, a popular instrument for cross-cultural epidemiologic studies (Helzer and Canino 1991). And, since it was the diagnostic instrument used in all the ECA studies, population norms are available to users for diagnostic and symptom rates in the United States. This national database, and the growing bodies of international data, provide a rich source of information that can be employed by DIS users to conduct a variety of cross-cultural comparisons with their own data. The DIS, instructions for its use, a history of its development, a listing of the program statements used for diagnostic scoring, the instructions for hand scoring the completed interview, and a computer readable tape with the scoring program and 35 test cases are available for a fee that covers reproduction and handling. The DIS has also been updated to a DSM-III-R version (DIS-III-R).

DSM-III and DSM-III-R Symptom Checklists. The DSM-III Symptom Checklist was developed originally as the comparison instrument for the DIS physician re-evaluation study, a part of the ECA survey at the St. Louis site (Helzer et al. 1985a; Helzer et al. 1985b). The instrument is a listing of criteria—as specified by DSM-III—for most of the diagnoses covered by the DIS. However, because it contains no symptom or probe questions, the examiner must be an experienced clinician. It also contains specific skip criteria: as soon as there are enough negative responses to prevent the respondent from meeting the DSM-III criteria for a given diagnosis, the remaining questions in that section are skipped. Diagnostic scoring is done by the examiner and recorded on a face sheet as the interview progresses. All the scoring rules are contained in the instrument, so there is no need to refer to the DSM-III manual.

The checklist section on drug abuse begins with a screening question about the specific drugs used "five times or more." For drugs which pass that threshold, the interviewer proceeds to inquire about the pattern of pathological use and impairment of social or occupational functioning, as specified by DSM-III for drug abuse, and about tolerance or withdrawal, as specified by DSM-III for drug dependence. The drug-specific criteria, as denoted in DSM-III, are contained in the instrument. The checklist has also been updated for DSM-III-R criteria, and a software program has been developed so that the checklist can be administered using a microcomputer.

Structured Clinical Interview for Diagnosis (SCID). This DSM-III-R-based instrument was developed by Spitzer and Williams (1985). The design format of the SCID is similar to the well-known SADS instrument discussed in the next section.

In the SCID, a suggested question is shown in the left column, the DSM-III criterion item to be ascertained is given in the middle column, and a coding blank is provided on the right for the final response to the specific DSM-III item. The examiner begins with the suggested question, but is free to ask additional questions if he or she desires, to elicit the information necessary to code the indicated DSM-III symptom.

There are several important differences between the SCID and the DIS. The first is in the level of clinical sophistication required of the examiner. The DIS is fully structured so that it can be used by either lay or clinician examiners. The SCID, on the other hand, is semi-structured; thus, examiners must have considerable clinical experience and familiarity with DSM-III if they are to use the instrument appropriately. Second, the DIS specifies that each symptom question be asked of each respondent; the SCID uses screening questions and skipouts for the diagnostic sections. A respondent is not asked subsequent questions in a given diagnostic area unless he or she passes through this initial screen. The obvious advantage of the screen is the reduction of total interview time for most respondents. The disadvantages are that since not all symptoms are asked of all respondents, prevalence rates of key symptoms for the study population cannot be determined and/or compared to other populations; constellations of symptoms outside the diagnosis of interest cannot be used to examine for illness correlates or as predictors of treatment outcome or natural history; and the investigator is constrained to use the original diagnostic definitions and, thus, does not have the latitude to explore other illness thresholds or definitions. Obviously, the choice of one of these instruments depends on the experience level of available examiners, time constraints, and the degree of flexibility desired for data analysis.

The Psychiatric Diagnosis Interview (PDI). This structured instrument was developed originally by Othmer and colleagues (1980) to ascertain the Renard criteria diagnoses. It is said to be "compatible" with DSM-III (Weller et al. 1985). For the past several years, the PDI has been used for routine initial examination in the psychiatric outpatient clinic at the University of Kansas, where it was developed. The drug dependence section begins with an opening question about any lifetime use of drugs for euphoric effects. This is followed by a series of seven general questions about personal, social, and legal problems and treatment related to drug use. Next is a series of questions on use of specific agents "pretty regularly for about six months at a time" and more specific treatment questions. For respondents who have evidence of drug dependency, ages of onset and recency of drug problems are determined.

The PSE and CIDI. The Composite International Diagnostic Interview (CIDI) (Robins et al. 1983) represents a collaborative effort between the authors of the Present State Examination (PSE) (Wing et al. 1974) and the authors of the DIS to develop a joint diagnostic instrument. The PSE has been used in cross-cultural research projects around the world and in numerous diagnostic studies in Europe and in North and South America. The completed CIDI interview can be scored either by the DIS diagnostic program or by the PSE program, CATEGO.

The PSE represents a different style of interview from the DIS. In its original form, the PSE is a guide for assessing the present (past month) mental state of adults and focuses on "one of the neuroses or functional psychoses." Suggested phrasing for symptom questions is given; however, examiners are encouraged to use their own phrasing, as appropriate, and to alter the sequence of the questions at will. "Cutoffs" allow the interviewer to eliminate the remaining items in a given section if no pathology has been uncovered up to that point. The examiner cross-examines the respondent and uses his or her judgment to determine which symptoms are present and at what level of severity. Obviously, the PSE requires an examiner with a good deal of clinical experience. However, the CIDI, like the DIS, can be used by lay examiners. Thus, one way the PSE and the DIS have been combined is by rewriting PSE questions and subquestions so that they can be asked and probed by lay examiners.

The PSE has no section that covers drug or alcohol abuse and so contributes nothing there. However, those sections of the CIDI interview have been expanded from the corresponding DIS sections by the addition of questions about the age of onset and recency of each of the symptom items for each of the drugs of inquiry. Also available is an expanded CIDI drug module for investigators with specific interests in drug or alcohol abuse. This special module contains additional questions that can yield a description of the severity and course of addiction and determine specific withdrawal symptoms for each drug class. The module also elicits information about seven types of specific health problems, their ages of onset, and their recency by drug class. The alcohol section of the DIS has been expanded in the CIDI to include the Edwards and Gross (1976) symptom items on alcohol abuse and dependency.

In addition to the PSE questions and the expansion of the substance use sections, the CIDI has another feature that is very useful for certain purposes; that is, it seeks to establish the ages of onset and recency (most recent occurrence) of every positive symptom. In terms of the amount of diagnostic information obtained, the CIDI is the most detailed instrument reviewed in this chapter, and it allows the investigator the most options. The SCID and the DSM-III Checklist ascertain a minimum level of detail. A respondent is skipped out of a diagnostic section as soon as there are a sufficient number of negative responses to indicate clearly that the full criteria are not met for a positive case. The advantages and disadvantages of this method are the same as those noted above for the SCID.

The next level of diagnostic information is exemplified by the DIS. Here, all symptoms are asked of every respondent regardless of the number of positive or negative symptoms in a given diagnostic section. Obviously, this requires more time. However, the increase in time is not substantial, since symptoms skipped in the SCID or the DSM-III Checklist are likely to be negative in the DIS, and negative symptoms require little interviewing time. The advantages of using the DIS may warrant any extra time required, because more information is obtained so that a wider variety of analyses can be conducted. Factor, cluster, admixture, or other types of appropriate analyses which search for new types of symptom groupings can be applied. The mean and distribution of key symptoms or of symptom clusters can be obtained for the entire subject population. The relationship and predictive value of specific items, such as childhood antisocial symptoms, can be tested against severity of drug abuse or other specific outcomes. Total symptom scores can be derived for comparison with other populations, and new diagnostic definitions can be tested.

The level of "symptom inquiry" in the CIDI requires the most time to administer, because the age of onset and offset of each symptom must be determined; yet, it also offers the widest range of analytic possibilities. The primary advantage of such inquiry is the opportunity it provides for studying the natural history of the development of specific syndromes. Two types of onset (and recency) for diagnoses can be defined: (1) when the first (or last) symptom occurred; and (2) when the full criteria were first (or last) met. This permits a more comprehensive study of the sequence of development of disorders when more than one illness is present and a closer scrutiny of the overlap of disorders. These possibilities open many avenues in terms of examining (1) the influence of earlier illnesses on the development and evolution of substance use and (2) the effect of antecedent illnesses on the treated or untreated outcomes of substance abuse. The additional detail about onset and recency also permits a broader range of comparison between separate study samples, a treatment versus a population sample, or samples drawn from different cultures. Certainly, the recognition of comorbidities is important in better understanding the development of the substance use disorders. Added knowledge about the development of substance use relative to the development of other psychiatric disorders increases the chances of finding effective ways to intervene to prevent the development of substance abuse. Furthermore, a better understanding of the differences in the evolution of substance abuse in cultures where it is and is not a common phenomenon may provide clues about etiology.

RDC-Based Instruments

Schedule of Affective Disorders and Schizophrenia (SADS). By far the most popular diagnostic instrument based on the Research Diagnostic Criteria (RDC) is the SADS, developed by Spitzer and Endicott (1975). It has been used extensively since the mid-1970s (Endicott and Spitzer 1978) in a variety of investigations. While the instrument title specifies affective disorders and schizophrenia, the interview can be used to obtain the diagnostic information necessary to utilize the entire set of RDC diagnoses, which include both alcohol and drug use. Some RDC information on alcohol and drug abuse is not as extensive as that contained in most DSM-III-based interviews, since the RDC are somewhat less detailed in this area than the DSM-III criteria. The DSM-III, as noted earlier, denotes specific symptoms for a pattern of pathological use and for impairment in social or occupational functioning for each of the compound classes of drugs of abuse. In comparison, the RDC are less specific in terms of allowable symptoms and problems, and they focus on a narrower range of behaviors and symptoms. However, the RDC are more detailed than DSM-III in the specifications of symptoms of dependence. Both the RDC and DSM-III define abuse categories for all of the compound drug classes and dependence for most of them.

There is no computer algorithm for diagnostic scoring of the SADS. Such scoring is done by the interviewer as the examination progresses and at its conclusion. The diagnostic focus of the SADS is on the current episode of illness. However, in addition to determining the occurrence of symptoms, the interviewer is instructed to rate symptoms of the current episode in terms of when they were most severe. No specific time frame is used. From such a system, one can obtain a more comprehensive picture of the longitudinal progression of the current episode. As Luria and Guziec (1981), point out: ". . . when the focus is on temporal frames defined independently for each symptom . . . it is quite possible to construct a composite of temporally unrelated symptoms instead of a syndrome."

The SADS is not a fully structured instrument. In this regard, it lies somewhere between the PSE and the DIS/CIDI. Specific questions are suggested for each of the required symptom items; however, it is often obvious that the initial rating requires followup or probe questions. Thus, compared to more rigidly structured instruments, the SADS offers the advantages of greater flexibility during examination, with more opportunity to probe and clarify responses as seems fitting to the particular informant or interview situation. This leads to two potential disadvantages compared to the more structured DIS: (1) it is not practical to use SADS interviewers who have no clinical training and experience; and (2) the SADS data set from any given sample will contain more examiner variance because of the variability in individual interviews.

In addition to the primary SADS, two other versions merit mention. One focuses on the lifetime occurrence of symptoms (the SADS-L), the other on the level of psychopathology in the past week (SADS-C). The latter can be used as a scaled measure of change.

The SADS was developed as the diagnostic instrument for a five-center Collaborative Program on the Psychobiology of Depression sponsored by the NIMH. Its use in this effort and other clinical investigations—including those on drug abuse—has provided a large body of published comparative data. Rounsaville and colleagues (1980) have compared the SADS/RDC and the DSM-III criteria for diagnosing drug abusers; Hesselbrock and coworkers (1982) have compared the SADS and the DIS and have found considerable similarity in the diagnoses among a sample of patients from a drug abuse treatment program.

The DIS and CIDI. The DIS and CIDI can be used to make RDC diagnoses. Since these two interviews emphasize DSM-III primarily, certain RDC requirements are only approximate in order to avoid redundancy. Therefore, if the RDC are the only criteria of interest, the DIS and CIDI would not be likely instruments of choice. However, they are worthy of consideration for RDC diagnoses if the investigator also is interested in making DSM-III or, as discussed below, Renard criteria diagnoses or if lay examiners are to be used as interviewers.

Interviews Based on the Renard Criteria

The Renard criteria (Feighner et al. 1972), developed at Washington University, are the predecessor of both the DSM-III and the RDC. They have been used for many years in various clinical and population studies and with a variety of structured and semi-structured interviews, each designed for a specific study. Only a few are noted here.

The Renard Diagnostic Interview (RDI). The RDI was developed as a core diagnostic interview which can be used for all of the Renard diagnoses. Other questions of interest can be added to the RDI. Both a clinician and a lay interviewer form are available. Further, the feasibility of using lay examiners has been demonstrated. Lay examiners using the RDI have been found to have diagnostic agreement levels between themselves and with clinician examiners that were comparable to agreement levels between two clinicians (Helzer et al. 1981).

The RDI is relatively easy to use and score. (The scoring instructions are provided in the left margin of the interview.) Questions on drug abuse include drug-specific items on quantity and frequency of use, as well as a few items about feeling dependent, withdrawal symptoms, treatment, and for those with any positive response, the age of onset of significant drug use. The section on alcohol abuse is more extensive but focuses almost exclusively on social, legal, and medical problems related to alcohol use.

The DIS and CIDI. As noted earlier, the DIS and CIDI can be used to make Renard criteria diagnoses. In fact, since these two instruments were developed at Renard Hospital, they may provide a closer approximation to the Renard criteria than to the RDC. As with the RDC, some sacrifices have been made with the Renard criteria in both instruments to avoid redundancy in the interview. In addition, because they cover more territory, both the DIS and CIDI take longer to administer than the RDI. However, unlike the RDI, the DIS and CIDI are computer scored—an advantage that reduces both interviewer time and clerical errors. Further, the additional areas covered in both instruments are relevant to most drug investigations.

Family Psychiatric History

In many studies in which diagnosis of the patient or proband is of interest, so too is the diagnosis of family members. There are several reasons for this interest. First, familial psychiatric disorder may be a risk factor in the development of drug abuse or dependence and/or a correlate or predictor of the natural history of drug problems. Thus, family disorder is of interest not only as a separate research variable but also as a control variable if analyses deal with genetic or environmental etiological clues and prediction of outcome. Second, since psychiatric illnesses tend to run in families, a knowledge of specific disorders in close relatives may help clarify an uncertain differential diagnosis in a patient. Third, detailed knowledge of relatives' illnesses may have implications for treatment. As illness tends to run in families, so often does treatment response. Knowledge of this response may provide clues for planning treatment modalities for the patient or client. Lastly, the familial social environment and the support it can provide are often important parts of the therapy for persons with any type of psychiatric disorder, including drug dependence. A knowledge of illness in family members is a key element in understanding the socio-familial context of the patient.

Several methods can be used to obtain diagnostic information on family members. The usual alternatives are the family history method and the family interview method. In the family history method, the proband or some key informant is interviewed and asked historical details about other family members. The typical error in the family history method is incomplete information and thus false negative diagnoses. In the family interview method, as many relatives as possible are interviewed. They are asked about their own history of illness and for information on collateral relatives who are deceased or otherwise unavailable. The family interview is obviously more comprehensive and accurate and is generally preferred to the family history method (Mendlewicz et al. 1975; Rimmer and Chambers 1969); however, it also is more expensive and sometimes inappropriate because family members are unavailable.

The Family History-Research Diagnostic Criteria (FH-RDC). The FH-RDC was developed by Dr. Jean Endicott and colleagues in the NIMH Collaborative Program on the Psychobiology of Depression. The FH-RDC document (Endicott et al. 1975) contains a specified set of criteria for making diagnoses in family members and a structured instrument for eliciting them. These are designed for use as a family history method. According to the authors, the criteria ". . . have been developed so that, as far as possible, they are similar to those of the Research Diagnostic Criteria which are used when a subject is directly examined." The differences in the FH-RDC and the RDC are ". . . based on the need to make allowances for the usual inability of informants to supply detailed information about the psychiatric disturbances of another person." Research indicates that while under-reporting of illness is still a problem with the FH-RDC, use of this method can minimize under-reporting and improve the specificity of the diagnostic information obtained from the family history approach (Andreasen et al. 1977).

The FH-RDC document begins with a description of its purpose and a set of instructions. An interview guide provides suggested questions for each of the major diagnoses. Next a set of guidelines are given for evaluating and recording ages, deaths, suicides, hospitalizations, and so on. Criteria are specified for 11 diagnostic categories, including drug use disorder and alcoholism. There also are specific guidelines for giving a diagnosis of "other" psychiatric disorder, a category ". . . for subjects with good evidence of significant psychopathology which is not clearly classifiable in any of the [other] categories" (Endicott et al. 1975). This designation can be used for persons who have clinically recognizable conditions that are not included in the FH-RDC, for nonspecific conditions, or when the details about episodes of psychopathology are so insufficient that a definitive classification cannot be made. Guidelines also are given for using a category of "no known mental disorder." Lastly, worksheets are provided for gathering the raw data, for coding diagnoses for individual first-degree relatives, and for preparing summary data for first- and second-degree relatives. All in all, this package should yield a much more comprehensive and consistent collection of family history information than is usually the case with family history methods.

The Renard Diagnostic Interview (RDI). The RDI also has a family history section that can be used as a guide in collecting family data from an interview respondent. The focus of the RDI family history inquiry is on first-degree relatives and half-siblings. Compared to the FH-RDC, the RDI family history section presumably takes less time to administer and score, but provides less detail and presumably less consistency in responses. As with the rest of the RDI, the family history section is designed to be administered by lay examiners. The section begins with questions designed to obtain the names and ages (or ages at death) of parents, siblings, half-siblings, and offspring. These are recorded (by name) on a raw data sheet. Next is a series of five questions about how much contact the respondent has with each of these relatives and about general evidence of psychopathology. Specific questions are then asked about depression, mania, schizophrenia, alcoholism, drug abuse, and antisocial personality; the relevant data are recorded by relatives on the data collection sheet. Finally, if any of the relatives were mentioned in the general questions about mental illness but not in the section on specific diagnoses, open-ended questions are used to ask about their illness(es). As with the FH-RDC, a summary coding sheet is provided; it is filled in from the data collection sheet so that the information can be card-punched for computer entry. In addition to its use in the complete RDI interview, this family history section can be used with other diagnostic interviews or as a single instrument.

Conclusion

The instruments covered in this chapter have one important factor in common: they are all built upon pre-existing sets of specified diagnostic criteria. To a degree, such an approach assumes the validity of the diagnostic system on which it is based. An alternative approach to interview construction, typified by the Present State Examination (PSE) of Wing and colleagues (1974), is to begin with a universe of psychopathological symptoms to be ascertained and apply a chosen set of diagnostic criteria after the data have been collected. For the type of studies primarily addressed in this sourcebook, the section for which the Wing approach is most likely to be desirable is that covering substance use. Since substance abuse is the most salient portion of inquiry, it is not likely that one would want to be confined to the information covered in any single set of diagnostic criteria. But for diagnostic sections other than substance abuse, the user of criteria-based instruments has to be aware of the confinement inherent in asking symptoms from a specified set of criteria and be willing to scrutinize each diagnostic section and consider other symptoms that might be of interest in future analyses which may not be covered in the particular diagnostic system on which the interview is based.

Of the instruments discussed in this chapter, the least constrictive in regard to diagnostic criteria is the CIDI. It contains—in addition to the three diagnostic systems covered in the DIS—the symptom items from the PSE. However, with such a broad scope, there is the potential problem of covering too much ground, that is, obtaining more information about peripheral diagnoses than is necessary or desirable in terms of time demands. One possible solution is to use diagnostic sections from the CIDI for disorders of primary interest and a briefer, exclusively criteria-based instrument like the DIS for peripheral diagnoses. At Washington University, we are currently developing a microcomputer package which will include software for both administration and scoring of the DIS, the CIDI, the CIDI drug module, and a series of screening interviews for most of the DSM-III diagnoses covered by the DIS. The package will incorporate a menu from which a user will be able to select the diagnoses of interest, the diagnostic systems in which the diagnoses are to be made, and the level of detail desired for each disorder. Diagnoses or broader areas of symptom inquiry of primary interest could be ascertained by the CIDI, given its broader psychopathological scope and its coverage of age of onset and offset of each symptom. Diagnoses for which less detail is required could be ascertained by the corresponding DIS sections. Diagnoses which are of little interest in the subsequent data analysis, but which need to be "ruled out," could be covered efficiently by the corresponding screening sections in the system. In response to these selections from the menu, the microcomputer would automatically present the information specified by the user. This is an ambitious goal and may take several years to achieve in its entirety, but it would be a way of striking a balance between efficiency and detail while preserving the comparability of diagnosis from one study to the next.

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Chapter VI
ASSESSMENT OF FAMILY FUNCTIONING

David H. Olson, Ph.D., and Judy Watson Tiesel, M.A.

Introduction

Effective assessment of family functioning has improved dramatically in the past decade in terms of reliability, validity, and clinical utility (Grotevant and Carlson 1989; Touliatos et al. 1990). Family inventories provide a critical bridge between research, theory, and practice (Olson 1976). Also, the effective interplay of research, theory, and practice facilitates the advancement of each domain.

Theoretical advances in the family field have been retarded by a lack of effective family assessment instruments. However, in the past few years considerable work has been done and a variety of self-report inventories has been developed (Fredman and Sherman 1987; Grotevant and Carlson 1989; Jacob and Tennenbaum 1988). Concern about the reliability, validity, and clinical utility of these instruments has also been growing. The traditional psychometric procedures are increasingly being used to improve these inventories.

An important assessment issue in the family field is whether the data are collected from the "insider's perspective" or from the "outsider's perspective" (Olson 1977). While self-reports can provide information on how family members perceive their family functioning (insider's perspective), behavioral and observational assessment are required to provide the outsider's perspective.

Research and clinical work have demonstrated consistently that these two perspectives provide different and often conflicting information (Olson 1989). This could be because families are unable to report accurately what they either do not want to see or have not been trained to see, such as systemic interactions. On the other hand, it could be because outside observers are unable to understand the shared meanings that a family has developed (Grotevant and Carlson 1989). While it was assumed initially that one approach is more valid than the other, it is more appropriate to consider *both* perspectives as relevant and necessary for a comprehensive assessment of marital and family functioning (Olson 1989).

This review deals exclusively with self-report family assessment, building on earlier reviews of these inventories both by the authors and by other scholars in the field (Fredman and Sherman 1987; Grotevant and Carlson 1989; Jacob and Tennenbaum 1988; Touliatos et al. 1990). Four of the five self-report instruments selected also have behavioral rating scales that can be used for assessment. Even though the dimensions of each self-report scale match those of the rating scales, no consistent attempts have been made to assess the level of agreement across these two methodological approaches. Often the behavioral rating scales have not undergone the same rigorous development as the self-report measures. For a more comprehensive review of a range of observational measures, see Markman and Notarius (1987) and Grotevant and Carlson (1989).

The five family self-report inventories selected for this more in-depth review represent those that met the following two criteria. First, each taps relevant dimensions that are generally agreed to be important both theoretically and clinically. Second, these five inventories are the most highly developed psychometrically; investigators have continually attempted to improve the reliability, validity and clinical utility of the scales.

Specifically, the five inventories selected for this review are:

- Family Adaptability and Cohesion Evaluation Scales: FACES II, developed by Olson et al. (1982b), and FACES III, developed by Olson et al. (1985);
- Family Assessment Device (FAD), constructed by Epstein et al. (1983);
- Family Assessment Measure (FAM III), developed by Skinner et al. (1984);
- Family Environment Scale (FES), developed by Moos and Moos (1981); and
- Self-Report Family Inventory (SFI), developed by Hulgus et al. (1985).

The publisher or source for purchasing each of these inventories is indicated in table 1.

Table 1. Where to obtain family inventories

Family Adaptability and Cohesion Evaluation Scales (FACES II or III)
David H. Olson, Ph.D., Director
Family Inventories Project
Department of Family Social Science
University of Minnesota
290 McNeal Hall
St. Paul, MN 55108
(612) 625-7250

Family Assessment Device (FAD)
Ivan W. Miller, Ph.D., Director
Brown University Family Research Program
Butler Hospital
345 Blackstone Boulevard
Providence, RI 02906
(401) 455-6200

Family Assessment Measure (FAM III)
FAM Project Coordinator
Addiction Research Foundation
33 Russell Street
Toronto, Ontario M5S 2S1
(416) 595-6129

Family Environment Scale (FES)
Consulting Psychologists Press
577 College Avenue
Palo Alto, CA 94306

Self-Report Family Inventory (SFI)
Southwest Family Institute
12532 Nuestra
Dallas, TX 75230-1718
(214) 960-0550

Theoretical Dimensions

Reviews of both the family therapy literature and theoretical frameworks in the family and other social science fields have revealed the salience of at least three dimensions for understanding family functioning and dynamics: *cohesion* (togetherness), *adaptability* (change), and *communication* (Olson et al. 1979; Olson et al. 1980; Olson et al. 1989). Table 2 indicates the theoretical dimensions of *cohesion, adaptability,* and *communication,* and how the specific scales in each of these five instruments relate to the three dimensions.

Since FACES was built on a theoretical review of the literature, the primary dimensions assessed in FACES are cohesion and adaptability. Separate scales have been developed to assess *marital communication* (Olson et al. 1982a) and *parent-adolescent communication* (Barnes and Olson 1982; Barnes and Olson 1989).

In the Family Assessment Device (FAD), affective involvement taps the cohesion dimension; behavior control, problem-solving, and roles tap the adaptability dimension; and communication and affective responsiveness relate to the communication dimension.

For the Family Assessment Measure (FAM III), the concepts and scales are very similar to the FAD scales. More specifically, affective involvement taps the cohesion dimension, while task performance, role performance, and control tap the adaptability dimension. Communication and affective expression relate to the communication dimension. Values and norms are the only subscales that do not seem to fit into the three dimensions.

In the Family Environment Scale (FES), the cohesion and independence scales relate to the cohesion dimension; the control and organizational scales relate to adaptability; and the expressiveness and conflict scales relate to the communication dimension. In the FES, there are four additional scales that do not fit into these categories: achievement orientation, active-recreational orientation, intellectual-cultural orientation, and moral-religious emphasis.

In the Self-report Family Inventory (SFI), cohesion is tapped by the subscales of positive emotional expression and cohesion. Leadership relates to the adaptability dimension, and the communication and conflict resolution subscales relate to the communication dimension. The family health scale is an overall measure consisting of items both unique and borrowed from the other subscales.

Criteria for Evaluating Family Assessment Inventories

In order to provide a systematic framework for evaluating these five family assessment scales, a set of criteria was developed and used (see table 3). The theoretical domain and model which provide the foundation for the scale was considered very important. Next, the assessment level dealt with whether the family as a whole was evaluated or whether the instrument also considered the component parts (i.e., dyadic and individual level functioning). The number of

Table 2. Five family inventories related to three theoretical dimensions

Inventory	Cohesion	Adaptability	Communication	Other
Family Adaptability & Cohesion Evaluation Scales (FACES III)	• Cohesion	• Adaptability	*Marital Communication *Parent-Adolescent Communication	
Family Assessment Device (FAD)	• Affective Involvement	• Problem Solving • Behavior Control • Roles	• Communication • Affective Responsiveness	
Family Assessment Measure (FAM III)	• Affective Involvement	• Task Accomplishment • Control • Role Performance	• Communication • Affective Expression	• Values and Norms
Family Environment Scale (FES)	• Cohesion • Independence	• Organization • Control	• Expressiveness • Conflict	• Achievement • Active-Recreational • Moral Religious • Intellectual-Cultural
Self-Report Family Inventory (SFI)	• Positive Emotional Expression • Cohesion	• Leadership	• Communication • Conflict Resolution	• Family Health

*These inventories are available from David Olson and are printed in the *Family Inventories Manual* (Olson et al. 1985)

scales and items was considered along with the normative sample and whether clinical samples had been collected. Finally, because of the increasing awareness in the family field of the importance of ethnic diversity issues, each scale was evaluated to see how such issues were addressed.

Reliability focused on the internal consistency of the scale. This assessed the degree of relationship between the items in the scale. Scales with high levels of homogeneity, as measured by Cronbach's alpha, indicated good *internal consistency reliability.* If the reliability is too high, it could indicate that the items are too similar, and this could reduce the content validity because the items only tap a limited range of issues. *Test-retest reliability* assessed the stability of the scores over a period of time. Short-term reliability was often over 2 to 6 weeks, with the long-term reliability extending from 6 to 12 months.

The validity of these scales was assessed in various ways. Basically, validity assesses whether the scale measures what it purports to measure. *Face validity* assesses whether the final instrument "looks like" it measures what it is intended to measure. Judgements about the adequacy of the items are often made by "experts" in a content area.

Table 3. Criteria for evaluating family assessment scales

Theoretical Domain and Model
Assessment Level (Individual, Couple or Family)
Number of scales, Number of items
Availability of Norms

Reliability:
Internal Consistency Reliability
Test-Retest Reliability

Validity:
Face and Content Validity
Correlation Between Scales in Instrument
Correlation with Social Desirability
Concurrent Validity
Correlation between Family Members
Discrimination Validity

Clinical Utility:
Usefulness of Self-report Scale
Ease of Administration and Scoring
Clinical Rating Scale
Applicability to Ethnic Diversity Issues

Content validity assesses whether there is a good representative sample of the range of content issues related to that domain. Empirically, it can be assessed by determining whether the items seem to fit together conceptually. Factor analysis can be used to demonstrate this by determining whether the items load on a particular factor. Another approach for assessing the content validity of an instrument is to determine the correlation between the various scales or subscales within the same instrument. The correlation of the scales with social desirability is particularly problematic with self-report scales. Therefore, it is useful in developing scales to assess this correlation and attempt to minimize a scale's correlation with social desirability.

Concurrent validity is the extent to which the scale correlates with other scales that measure the same construct (Campbell and Fiske 1959). This is assessed by comparing a scale with others intended to measure the same construct.

The correlation between responses of family members is one area that should be considered. Currently, considerable evidence points to a lack of agreement between family members and self-report scales that measure family dynamics. Lastly, discriminating between normal and problem families is one important criterion for assessing the discriminant validity of the scales.

In considering the clinical utility of these scales, it is important to consider how useful the scale is clinically and how difficult it is to administer and score. Those investigators who developed the self-report scales also developed a *clinical rating scale*, which can be used by therapists or raters to evaluate the behavior of family members, either in therapy or in some observational situation. This type of clinical rating scale provides an outsider perspective that can be compared with the self-report descriptions (insider's perspective) provided by family members. Currently, most existing research indicates a lack of congruence between these insider and outsider perspectives, even within the same theoretical model (Olson 1985).

Review of Self-Report Scales

In the following paragraphs, the five self-report scales are discussed in alphabetical order.

Family Adaptability and Cohesion Evaluation Scales (FACES)

Theoretical Domain. FACES has undergone three revisions in efforts to assess the two major dimensions of the Circumplex Model, i.e., cohesion and adaptability. Cohesion is defined as the emotional bonding that individuals in the family have towards each other. Adaptability relates to family power structures, role relationships, and relationship rules (table 4).

Table 4. Family Adaptability and Cohesion Evaluation Scales (FACES)

Cohesion	The degree of emotional bonding between family members.
Adaptability	The ability of a marital and family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress.

The Circumplex Model was developed by Olson et al. (1980, 1983, 1989) in an attempt to construct a model that would help bridge research, theory, and practice. Communication, the third dimension of the Circumplex Model, facilitates movement on the other two dimensions. These three dimensions were derived from a conceptual clustering of numerous concepts in the marriage and family field (Olson et al. 1983).

An essential characteristic of the Circumplex Model is its *curvilinear* relationship with family functioning. Extreme levels of cohesion or adaptability represent Extreme family types and are more problematic than moderate levels, which represent Balanced family types. The observational measure, the Clinical Rating Scale (CRS), has continued to support the curvilinear hypothesis (Thomas and Olson 1991).

A recent theoretical update (Olson 1991) indicated that FACES II and III operate in a *linear manner*, a phenomenon due to the nature of the self-report scales, not the underlying theoretical model. Hence, a 3-D Circumplex Model was introduced in which high FACES scores represent Balanced types and low scores represent Extreme types. A fourth version of FACES, currently in progress, is designed to measure the curvilinearity of the Circumplex Model.

Reliability and Validity. The normative sample for FACES II was 2,453 adults from across the life cycle and 412 adolescents. FACES III, the most recent version, has been used in over 500 research projects with good evidence of reliability and validity. Recently, however, some findings have suggested that FACES II has some advantages over FACES III. The alpha reliability is higher in the 30-item FACES II than in the 20-item FACES III. The test-retest reliability for FACES II was relatively high, 0.83 for cohesion and 0.80 for adaptability over a 4- to 5-week period (table 5).

The face and content validity of the scale are generally very good. In terms of validity, FACES III may have some advantages over FACES II. The correlation between adaptability and cohesion is considerably higher in FACES II (0.65) than in FACES III (0.03). Social desirability responses remained approximately the same across FACES II and III when correlated with cohesion (0.39 and 0.35 respectively). For adaptability, the correlation with social desirability was reduced from 0.38 in FACES II to virtually nothing in FACES III.

However, the concurrent validity for FACES II is higher than for FACES III, especially for family adaptability. That is, other instruments which measure constructs similar to cohesion and adaptability correlate higher with FACES II than FACES III (Green 1989; Hampson et al. 1991).

Table 5. FACES criteria

	Family Adaptability & Cohesion Evaluation Scales (FACES)	
Theoretical Domain and Model	Family System Circumplex Model	
Assessment Level	Family as Whole	
Norms		
Normative Sample	n = 2,453 adults across life cycle	
Clinical	Problem families chemically dependent	
	FACES II	FACES III
Number of Scales and Items	2 Scales; 30 items total 16 cohesion items 14 adaptability items	2 Scales; 20 items total 10 cohesion items 10 adaptability items
Reliability		
Internal Consistency	Very good evidence Cohesion (r=0.87) Adaptability (r=0.78)	Good evidence Cohesion (r=0.77) Adaptability (r=-0.62)
Test Retest	FACES II (4-5 weeks) 0.83 for cohesion 0.80 for adaptability	
Validity		
Face Validity		Very good evidence
Content Validity		Very good evidence
Correlation Between Scales	Cohesion & Adaptability (r=0.65)	Cohesion & Adaptability (r=0.03)
Correlation with Social Desirability	Cohesion & SD (r=0.39) Adaptability & SD (r=0.38)	Cohesion & SD (r=0.39) Adaptability & SD (r=0.00)
Concurrent Validity	Good evidence (linear relationship)	Good evidence (linear relationship)
Correlation Between Family Members		X = H/W/A (n=370) Cohesion (r=0.42) Adaptability (r=0.20)
Discrimination Between Groups		Very good evidence
Clinical Utility		
Usefulness of Self-Report Scale	Very good evidence	
Ease of Administering and Scoring	Very easy	
Clinical Rating Scale	Yes	
Ethnic Diversity Utility	Good evidence	

Considerable evidence indicates that FACES discriminates between clinical groups. Most past research has focused on distinguishing between Balanced versus Extreme types in the Circumplex Model. The FACES manual cites many studies which used either of the first two versions successfully to discriminate between clinical/high risk families and balanced/control groups. FACES as a linear measure can distinguish balanced, mid-range, and extreme family types. Recent evidence also demonstrates the value of the CRS in discriminating "problem" from "non-problem" families (Thomas and Olson 1991).

Clinical Utility. The clinical utility of FACES is very good. It takes approximately 10 to 15 minutes to complete the scale, and children from ages 10 through 12 can be administered FACES since it is written at a seventh grade reading level.

As mentioned, the observational measure, CRS, has been designed to be used independently or in conjunction with FACES. In addition to adaptability and cohesion, it also assesses the communication dimension.

Many studies have tested the effectiveness of using FACES with ethnic populations. To date, research has been done with Mexican-American, Puerto Rican, African-American, Chinese-American, and multi-ethnic family samples with very good results. Currently, work is underway to establish norms for various ethnic groups.

Family Assessment Device (FAD)

Theoretical Domain. The FAD is based on the McMaster Model of Family Functioning developed by Epstein et al. (1983). The FAD assesses the family as a whole, with emphasis on current family functioning. The McMaster Model of Family Functioning is based on the earlier conceptual framework of the Family Categories Schema (Epstein et al. 1968), which was originally developed and used in a study of 110 "non-clinical" families (Westley and Epstein 1969).

In addition to a general functioning scale, six theoretical dimensions are built into the FAD instrument. The conceptual dimensions are affective involvement, behavioral control, roles, problem solving, communication, and affective responsiveness. Conceptual definitions of these scales are provided in table 6.

Reliability and Validity. The norms for the FAD (see table 7) are based on 503 adults (Epstein and Bishop 1981). The internal consistency reliability of the seven FAD scales generally is very good. The mean reliability is 0.78; the range for the seven scales is 0.72-0.92.

Table 6. Family Assessment Device (FAD) scales

Affective Involvement	The degree to which the family as a whole shows interest in the values and activities of individual family members.
Behavioral Control	The pattern the family adopts in handling physically dangerous situations, meeting and expressing psychobiological needs and dealing with interpersonal socializing behavior. Four styles of control are described: (1) rigid, (2) flexible, (3) laissez-faire, and (4) chaotic.
Roles	Roles of the recurrent patterns of behavior by which individuals fulfill family functions. The necessary family roles include provision of resources, nurturance and support, sexual gratification, life skills development, and maintenance and management of the family systems.
Problem Solving	The family's ability to resolve problems, both instrumental and affective types, in a way that maintains affective family functioning. The problem-solving process is broken down into seven stages.
Communication	Communication is defined as the exchange of information within a family. Communication is focused on the verbal level and is subdivided into instrumental and affective areas. Two independent dimensions of communication are emphasized: (1) clear vs. masked, (2) direct vs. indirect. Pairing these two styles identifies four patterns of communication.
Affective Responsiveness	This is the ability of family to respond to a range of issues with appropriate quality and quantity of feelings. Regarding quality, the concern is whether there is a full range of feelings expressed and whether the emotion is consonant with the situation.

Table 7. FAD criteria

	Family Assessment Device (FAD)
Theoretical Domain and Model	Family System McMaster Model
Assessment Level	Family as Whole
Number of Scales and Items	7 Scales; 53 Items
Norms	
Normative Sample	n=503 adults
Clinical	Variety of clinical samples in progress
Reliability	
Internal Consistency	Very good evidence
Test Retest	X=0.71 Range = 0.66-0.74 for 1 week (n=53)
Validity	
Face Validity	Very good evidence
Content Validity	Very good evidence
Correlation Between Scales	X=0.56
Correlation with Social Desirability	Range = -0.06-0.19 (n=164)
Concurrent Validity	Good evidence
Correlation Between Family Members	Lack of evidence
Discrimination Between Groups	Good evidence
Clinical Utility	
Usefulness of Self-Report Scale	Very good evidence
Ease of Administering and Scoring	Good evidence, but no existing manual
Clinical Rating Scale	Yes
Ethnic Diversity Utility	Some evidence

The test-retest reliability over a 1-week period also was relatively good, with a mean of 0.70 and a range of 0.66-0.75 (n=53).

A more recent study (Kabacoff et al. 1990) investigating reliability from data obtained from the FAD research files found the strongest internal reliability for the General Functioning subscale (0.83 for the non-clinical group), while the Roles subscale had only marginal reliability of 0.57. Both face validity and content validity of the scales appear very good.

One problematic issue with the FAD is the high correlation between the seven scales (mean=0.56, range=0.37-0.76). This occurs primarily because of the high correlation with the global scale of General Functioning. When partial correlations were used to hold General Functioning constant, correlations between the scales dropped to an average of 0.11.

A series of studies examining the reliability and validity of the FAD (Miller et al. 1985) found that the correlations of the scales with social desirability ranged from -0.06 to -0.19 (n=164). Concurrent validity was examined in this project by comparing the FAD to two other family scales, FACES II and Family Unit Inventory. The correlations obtained were generally quite good and congruent with theoretical expectations, and the relationship between FAD and FACES II was linear.

In terms of discriminative validity, two studies showed good evidence of the ability to distinguish between clinical and non-clinical samples. In the first study (Epstein and Bishop 1981), a sample of 218 non-clinical individuals was compared with a sample of 98 clinical individuals. There were significant differences between the groups on all of the scales. By using discriminant analysis, they were able to predict to some extent whether a family came from a clinical (64 percent accuracy) or non-clinical (76 percent accuracy) group.

In a second discriminative validity study (Miller et al. 1985), 42 clinical patients were assessed by family therapists and rated for healthy or unhealthy family functioning on each of the six dimensions. At the same time, all family members completed a FAD. Results indicated that the FAD scores corresponded to the clinicians' assessments on every dimension except Behavior Control. These results along with theoretical support were then used to establish cut-off scores to differentiate healthy from unhealthy families on each dimension, with a fairly good rate of success in the following: sensitivity (57-83 percent), specificity (64-79 percent), and diagnostic confidence (68-89 percent).

More recently, the General Functioning (GF) subscale was tested for reliability and validity in an Ontario child health study (Byles et al. 1988). This 12-item scale, when used in a sample of 1,869, resulted in very good alpha reliability (0.86). Validity was assessed by hypothesizing relationships between criterion variables within the data set and the GF scale. All findings were in the predicted direction, except for socioeconomic status and family structure, which were weakly related.

Clinical Utility. The clinical utility of the FAD appears to be very good. A number of articles have been written on the McMaster Model in clinical treatment and training (e.g., Bishop and Epstein 1985; Bishop and Epstein 1987; Epstein et al. 1988; Keitner 1990). It appears to be a clinically useful scale that is easy to score and can be used with children down to the age of 12.

There is also a McMaster Clinical Rating Scale, which can be used for clinical assessment of families and for obtaining ratings from therapists. A recent study (Fristad 1989) found that every scale except for Affective Responsiveness had significant correlations (0.38-0.69) between the FAD and its clinical rating scale. There is some indication that a few of the clinical scales may be hard to score, and the choice of words on some items may be problematic (Fristad 1989).

In terms of application to ethnic diversity issues, the FAD was recently used with Hawaiian-American and Japanese-American groups in conjunction with a structured interview (Morris 1990). Results indicated that, when FAD scores were compared to the interviews, the FAD had incorrectly assessed the Japanese-Americans with regard to affective responses and behavior control. Compared to the FAD norms, the Japanese-American group scored in the emotionally constricted range with a rigid style of behavior. However, this was not consistent with the interview data. It is possible that the self-report data reflect the traditional views and values of Japanese-Americans.

Family Assessment Measure (FAM III)

Theoretical Domain. The FAM III is built on the Process Model of Family Functioning, which attempts to integrate various perspectives of family therapy and research (Steinhauer et al. 1984). The Process Model builds on the Family Categories Schema developed by Epstein et al. (1981), in that similar dimensions of family behavior are identified as important for understanding family functioning.

The specific variables in the Process Model include task accomplishment, role performance, communication, affective expression, involvement, control, and values and norms. Definitions of these scales are presented in table 8.

While the FAM focuses on the family system, it also provides an assessment of dyadic functioning. The most recent version of the instrument is FAM III. It consists of three components: a General Scale, which focuses on the family as a system; a Dyadic Relationship Scale, which examines relationships between specific pairs in the family; and a Self-Rating Scale, which taps the individual's perception of his or her functioning in the family (Skinner et al. 1983). Each of these major scales assesses the seven important dimensions of family functioning, but each provides a different perspective on how the family system operates. The Dyadic Scale appears to be much more sensitive to dysfunction than the General Scale.

The FAM III consists of three specific assessment components—the General Scale consisting of 50 items, the Dyadic Scale consisting of 42 items, and the Self-Rating Scale consisting of 42 items. The General Scale also includes two response style measures: social desirability (7 items) and defensiveness (8 items). If all three scales are used, there is a minimum total of 134 items, depending upon how many dyadic units within the family are assessed. Most current users of FAM III incorporate all three scales.

Reliability and Validity. The norms for FAM III are based on 312 individuals (Skinner et al. 1984). Some norms have also been developed with an extensive sample of clinical families. To date, there are a total of 53 published studies using FAM.

Table 8. Family Assessment Measure (FAM III)

Affective Involvement	This is the degree and quality of family member's interest and concern for one another. This will determine whether the relationships are nurturant and supportive or destructive and self-serving. There are five types of family affective involvement: (1) uninvolved, (2) interest and devoid of feeling, (3) narcissistic, (4) empathic, and (4) enmeshed.
Control	This describes a variety of interpersonal strategies or techniques used to influence another member's behavior. There are four types of family control: (1) rigid, (2) flexible, (3) laissez-faire, and (4) chaotic.
Role Performance	Roles are prescribed in repetitive behaviors involving a set of reciprocal activities with other family members. These roles either facilitate or impede successful task accomplishment. Roles can be classified into either traditional or idiosyncratic.
Task Accomplishment	This is the central focus of the process model. While some of the family tasks are culturally defined, others are defined by the family's norms and values. There are basically three types of tasks: (1) basic tasks, (2) developmental tasks, and (3) crises tasks.
Communication	This is a mechanism through which formation for affective role performance and task accomplishment is exchanged. The content of communication can be affective, instrumental, or neutral.
Affective Expression	This is a vital element in effective communication. It includes the content, intensity, and timing of feelings expressed, and it is the most often distorted in times of stress.
Values and Norms	These provide the background against which all basic processes must be considered. They include whether family rules are explicit or implicit, the latitude for members to determine their own attitudes, and whether family norms are consistent with the broader cultural context.

The internal consistency reliability of the three scales is excellent: 0.93 for the General Scale, 0.95 for the Dyadic Relationship Scale, and 0.89 for the Self-Rating Scale (see table 9). The reliability for the subscales within each of these major scales is somewhat lower but still acceptable. The median reliability for the nine subscales in the General Scale was 0.73; for the six subscales in the Dyadic Relationship Scale it was 0.72; and for the six subscales in the Self-Rating Scale it was 0.53.

At this time there is a lack of evidence on the test-retest reliability of any of these three primary scales.

In terms of concurrent validity, there is a lack of evidence on the correlation of these scales with other approaches to family assessment. However, both face validity and content validity for all three scales appear adequate.

One problematic issue for these three primary scales is that there appears to be a strong general factor of family functioning. This is revealed by the rather high intercorrelations among the subscales of each of the major scales. Skinner (1987) found the following correlations between the subscales: General Scale, 0.39-0.70; Dyadic Relationship Scale, 0.68-0.82; Self-Rating Scale, 0.25-0.63.

Another problem is the correlation of social desirability with each of the scales: General Scale, -0.53; Dyadic Scale, -0.35; and Self-Rating Scale, -0.35.

The correlation between family members' responses on the General Scale was 0.36 for normal couples and 0.51 for clinical couples. This level of correlation between family members is typical of what has been found in other studies of family functioning that use self-report methods (Olson et al. 1983).

The ability of FAM III to discriminate between problem families and non-problem families was examined in a recent study by Skinner (1987). Families who had a member receiving professional or clinical help were more likely to score poorly on role performance and involvement subscales than non-problem families. Recently, a study of 76 families of children with school phobia were assessed (Bernstein et al. 1990). The parent-child dyad was rated dysfunctional in the areas of role performance and values and norms. Westhues and Cohen (1990) examined families in which special-needs adoptions were successful versus disrupted. A discriminant function analysis showed that the FAM was able to predict correctly between the two groups in over 90 percent of the cases, based largely on the wife's

Table 9. FAM III criteria

	Family Assessment Measure (FAM III)
Theoretical Domain and Model	Family System Process Model
Assessment Level	Family, Dyadic and Individual
Number of Scales and Items	General Scale (50 items) Dyadic (42 items) Self Rating (42 items)
Norms	
Normative Sample	Norms based on 312 individuals
Clinical	Variety of Clinical Families
Reliability	
Internal Consistency	Excellent evidence General Scale (r=0.93) Dyadic Scale (r=0.95) Self-Rating Scale (r=0.89)
Test Retest	Lack of evidence
Validity	
Face Validity	Very good evidence
Content Validity	Very good evidence
Correlation Between Scales	r=0.25-0.82
Correlation with Social Desirability	r=-0.53 General Scale & SD r=-0.35 Dyadic Scale & SD r=-0.35 Self Rating & SD
Concurrent Validity	Lack of evidence
Correlation Between Family Members	H/W on General Scale r=0.36 Normal Couples r=0.51 Clinical Couples
Discrimination Between Groups	Good evidence
Clinical Utility	
Usefulness of Self-Report Scale	Very good evidence
Ease of Scoring	Very easy
Clinical Rating Scale	Not yet published
Ethnic Diversity Utility	Lack of evidence

values and norms and the husband's involvement.

Clinical Utility. The FAM III takes about 30-45 minutes to administer. It may be completed by family members as young as 10-12 years of age. Testing materials must be obtained by the project coordinator, and plans are underway to have FAM III formally published within the year.

Goals for developing this inventory were not only to assess both individual intrapsychic functioning and total family system functioning, but also to provide data that are clinically useful (Steinhauer 1984; Steinhauer and Tisdall 1984). The clinical usefulness of this model appears promising. Some caution has been expressed as to FAM III's sensitivity to changes in family functioning as measured before and after a clinical treatment program (Blackman et al. 1986). A structured interview and clinical rating scale are currently still being tested.

No information is available about the FAM III's utility for ethnically diverse samples.

Family Environment Scale (FES)

Theoretical Domain. The FES was one of the earliest self-report assessment scales developed; it was based on dimensions which were found useful in studying the social climate of families (Moos 1974). The criteria for evaluating the FES and a summary of the evaluation are shown in tables 10 and 11.

Table 10. Family Environment Scale (FES)

Relationship Dimension	
Cohesion	Commitment, help, and support family members provide for one another.
Expressiveness	How much family members are encouraged to act openly and to express their feelings directly.
Conflict	The amount of openly expressed anger, aggression, and conflict among family members.
Personal Growth Dimension	
Independence	The extent to which family members are assertive, self-sufficient, and make their own decisions.
Achievement Orientation	The extent to which activities (e.g., school and work) are cast into an achievement-oriented or competitive framework.
Intellectual-Cultural Orientation	The degree of interest in political, social, intellectual, and cultural activities.
Active-Recreational Orientation	Extent of participation in social and recreational activities.
Moral-Religious Emphasis	Emphasis on ethical and religious issues and values.
System Maintenance Dimension	
Organization	The importance of clear organization and structure in planning family activities and responsibilities.
Control	Extent to which set rules and procedures are used to run family life.

The FES contains ten scales, which are divided into three major dimensions. The Relationship Dimension consists of the three scales of cohesion, expressiveness, and conflict. The Personal Growth Dimension consists of five scales: independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, and moral-religious emphasis. The System Maintenance Dimension consists of the two scales of organization and control. There are nine items for each of the ten scales.

The assessment level of FES is on the family as a whole. The focus of the assessment can be on current family functioning (real form), ideal family functioning (ideal form), and an individual's expectations about family functioning (expectation form). Each of these separate forms consists of a 90-item, true-false questionnaire.

While the initial study for developing norms for the FES was based on a sample of 285 families (Moos 1974), an updated manual (Moos and Moos 1986) describes the updated norms based on 1,428 adults and 621 adolescents. The final normal sample consists of 1,125 families and norms for 500 distressed families.

Reliability and Validity. In terms of reliability, the internal consistency reliability of the ten scales was good. The average reliability was 0.73, the range was 0.61-0.78. The test-retest reliability also was good, ranging from 0.68 to 0.86 for 8 weeks, and from 0.52 to 0.89 for 1 year.

In terms of face validity, the items do appear to measure what they were intended to measure. For content validity, there seems to be a good representative range of relevant issues for each of the scales.

Construct validity has been examined by several investigators, resulting in some inconsistent findings. Fowler (1981, 1982) conducted a factor analysis which revealed two major factors: (1) cohesion versus conflict, and (2) organization and control. This supports some of the earlier theoretical work (Olson et al. 1983) which emphasizes the salience of the *two* dimensions of cohesion and adaptability. In a factor analysis by Robertson and Hyde (1982), seven areas were identified instead of the ten which comprise the subscales. Although Nelson (1984) identified three factors in his study of middle-school aged children, they differed from the original three dimensions described by Moos.

When correlations between the ten scales are reviewed, there appears to be a moderate level of correlation between the scales. Fowler (1982)

Table 11. FES criteria

	Family Environment Scale (FES)
Theoretical Domain and Model	Family Climate Social Psychological Model
Assessment Level	Family as Whole
Focus of Assessment	Real; Ideal; Expectation
Number of Scales and Items	10 Scales; 90 Items
Norms	
Normative Sample	n = 1,498 Adults n = 621 Adolescents
Clinical	n = 500 Distressed Families
Reliability	
Internal Consistency	Good evidence; X=0.73; Range = 0.61-0.78
Test Retest	0.68-0.86 for 8 weeks; 0.52-0.89 for one year
Validity	
Face Validity	Very good evidence
Content Validity	Very good evidence
Correlation Between Scales	X=0.20
Correlation with Social Desirability	Range = 0.02-0.44
Concurrent Validity	Mixed
Correlation Between Family Members	Lack of evidence
Discrimination Between Groups	Very good evidence
Clinical Utility	
Usefulness of Self-Report Scale	Very good evidence
Ease of Administering and Scoring	Good evidence
Clinical Rating Scale	Not developed
Ethnic Diversity Utility	Some evidence

indicated that the correlation of the scales with social desirability ranged from 0.02 for moral-religious emphasis to 0.44 for cohesion. A study of 183 undergraduates by Schmid et al. (1988) using two FES scales (cohesion and control) found correlations with social desirability of 0.10 and 0.01, respectively.

Concurrent validity of the FES is somewhat mixed. At least two different modified multi-trait multi-method analyses have revealed different results. One by Russell (1980) found that the FES cohesion scale did not correlate with the other three self-report or behavioral assessments of cohesion. Another analysis by Schmid et al. (1988) showed that FES cohesion correlated with FACES II cohesion (0.74), while FES control correlated with FACES adaptability (-0.32). On the other hand, Oliveri and Reiss (1984) found no significant correlations between Reiss' Card Sort procedure and the FES.

In terms of discriminant validity, more than 200 studies have demonstrated that the FES discriminates between different types of families. In one cluster analysis, 100 families were clustered into six family types (Moos and Moos 1976). The FES also has been found to be useful in discriminating distressed families (Moos and Moos 1981) and indicating changes as a result of alcoholism treatment (Finney et al. 1980, 1983; Moos and Moos 1984; Moos et al. 1979, 1981, 1982).

More recently, Dinning and Berk (1989) found differences among a sample of children of alcoholics. Those who indicated more distress with a parent's drinking scored lower in family cohesion and overall family support and higher in family conflict. A study about stepfamilies (Brown et al. 1990) distinguished between those in therapy for a child-focused problem and those not in therapy, with no child-focused problems. The latter group reported higher expressiveness and lower conflict than the therapy group.

Clinical Utility. The clinical utility of the FES scale appears to be quite good. Fuhr et al. (1981)

compared a family's real description (Form R) and ideal description (Form I) of the family environment to identify areas needing change. Moos and Fuhr (1982) also illustrated how FES can be used to complete a clinical assessment and formulate intervention strategies.

The FES is rather easy to administer and score. The possibility of using the various 90-item forms becomes problematic in major outcome studies because of the length of each form (n = 90 items). However, a modified version of the FES has recently been used as a measure of family environment. The Family Relationship Index (FRI) is a composite of the family cohesion, expressiveness, and conflict subscales of the FES, with only 27 items. Hoge et al. (1989) investigated the construct validity of the FRI by comparing scores of families in counseling to evaluations by family therapists. Correlations between the FRI and therapists' ratings ranged from -0.27 to -0.46. At present there is no clinical rating scale for the FES.

The sample from which the FES was normed reportedly included diverse family characteristics. Baranowski et al. (1986) examined the psychometric properties of the FES with Anglo, African-American, and Mexican-American adult family members. Internal consistency was rather low (although it was highest for the Anglo sample), and the factor analysis revealed subscales within the original dimensions. The authors suggest that reading abilities, inappropriate items, and lack of real-life relevance to the other two ethnic groups may have contributed to the results.

Munet-Vilaro and Egan (1990) used the FES in two cross-cultural studies with Puerto Rican families and Vietnamese foster families. Internal consistency reliability was not strong, but contributing factors may have been translation inadequacies, dissimilar values, or use of colloquialisms.

Self-Report Family Inventory (SFI)

Theoretical Domain. The SFI is based on the Beavers Systems Model of Family Functioning (BSM), which derives from three main sources: general systems theory, clinical work with families, and research.

The SFI contains six scales, which are designed to measure family members' perceptions of their family's health, conflict, communication, cohesion, directive leadership, and expressiveness. The conceptual definitions are provided in table 12. A second-order factor analysis has collapsed the previous six areas into (a) health/competence, (b) style, and (c) expressiveness. These three factors are reportedly congruent with the observational instruments of the BSM.

Reliability and Validity. The norms for the SFI are based on 186 families (Grotevant and Carlson 1989). Reliability characteristics are very good internal consistency, assessed at 0.84-0.88 (see table 13). The test-retest reliability was assessed at 30 and 90 days, and was strongest for family health and expressiveness scales. Test-retest reliability was not strong for the scales of communication (0.39) and directive leadership (0.44).

Table 12. Self-Report Family Inventory (SFI)

Overall Competence Dimension	
Family Health/Competence Factor	Items involving happiness, optimism, problem-solving abilities, parental coalitions, allowance for individuality, acceptance of individuals and love in the home, low blaming behaviors.
Behavioral and Emotional Dimensions	
Conflict	Items concerning fighting, arguing, blaming, problem-solving vs. unresolved conflict, acceptance of personal responsibility, and negative feeling tone in the family.
Communication	Items involving direct, open discussions, speaking one's mind directly, and open conflict resolution.
Cohesion	Items concerning togetherness, satisfaction derived from inside the family vs. outside, and spending time together.
Directive Leadership	Parental leadership and directive leadership vs. rigid control in the family.
Positive Emotional Expression	Open expression of warmth, caring and closeness, by verbal or nonverbal means.

Table 13. SFI characteristics

	Self-Report Family Inventory (SFI)
Theoretical Domain and Model	Family Systems Beavers Systems Model of Family Functioning
Assessment Level	Family
Focus of Assessment	Perceived real
Number of Scales and Items	6 scales; 36 items
Norms	N=186 families (Grotevant)
Reliability	
Internal consistency	Very good; range=0.84-0.88
Test-retest	X=0.60 Range=0.48-0.84 for 90 days
Validity	
Face validity	Very good evidence
Content validity	Good evidence
Correlation between scales	Lack of evidence
Correlation with social desirability	Range=-0.03-0.11
Concurrent validity	Very good evidence
Correlation between family members	Pilot studies range from 0.11 to 0.67
Discrimination between groups	Very good evidence
Clinical Utility	
Usefulness of Self-Report Scale	Very good evidence
Ease of administering and scoring	Very good evidence
Clinical Rating Scale	Two: Beavers-Timberlawn Family Evaluation Scale Centripetal/Centrifugal Family Style Scale
Ethnic applicability	Some evidence

Face validity of the scales appears very good. Content validity might be of concern for those scales which consist of four items or less (family communication and directive leadership). Correlational analysis between the scales was not reported. None of the correlations between social desirability and the various scales was significant.

In terms of concurrent validity, the SFI has been extensively tested. SFI scales have for the most part shown moderate to strong correlations with other scales (e.g., FACES II and III, Bloom Family Evaluation Scale, FES, and FAD). The "health" scale shows the strongest correlation with other measures, while the communication scale has yielded inconsistent results.

There is evidence that the dimensions of health/competence and expressiveness can be used to discriminate between high and low functioning families. In one pilot study, emergency room psychiatric patients were diagnosed by hospital staff while accompanying family members completed the SFI. Initial results showed a relationship between Beaver's Model of family style and psychiatric disorder (Beavers and Hampson 1990).

Clinical Utility. The SRI was initially designed to be used in conjunction with the observational ratings scales of the Beavers Systems Model of Family Functioning, and the clinical utility appears quite good. No special training procedures are necessary, although a familiarization with the Beavers Systems Model is helpful. The manual includes scoring and psychometric information.

There are two observational rating scales: the Beavers-Timberlawn Family Evaluation Scale (Lewis et al. 1976) and the Centripetal/ Centrifugal Family Style Scale (Kelsey-Smith and Beavers 1981). The former assesses family competence, while the latter measures family style.

With regard to ethnic diversity issues, more results are reported for the observational rating scales than for the SFI. Studies of European-American, African-American, and Mexican-American families have found no differences in competence or style, but some differences in interaction patterns have been observed (Beavers and Hampson 1990).

Conclusion

The five self-report inventories of family functioning selected for this review represent the state of the art. All five inventories are derived from a theoretical framework, and each has been studied in terms of reliability, validity, and clinical utility. For each of the inventories there is a commitment to continual improvement of scientific rigor and clinical usefulness, including application to diverse ethnic samples. Also, all of these inventories are being used currently in ongoing research. Table 14 provides an indicator of concurrent validity among four of the five scales.

Although the self-report instrument may be the most widely used research tool, the assessment of family functioning is far from finalized. It is our hope that professionals in the family field will continue and further their cooperative efforts to bridge research, theory, and practice, to the benefit of each and the advancement of family science.

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Table 14. Correlations between the SFI, FES, FAD, and FACES family assessment instruments

	FES**									
SFI	Cohesion	Expressiveness	Conflict	Independence	Achievement Orientation	Intellectual-Cultural Orientation	Active-Recreational Orientation	Moral-Religious Emphasis	Organization	Control
Family health	-0.73	-0.50	0.66	0.26	0.14 (n.s.)	-0.40	-0.38	-0.21	-0.18 (n.s.)	0.28
Conflict	-0.48	-0.35	-0.68	-0.19 (n.s.)	0.29	-0.13 (n.s.)	-0.18 (n.s.)	-0.23	-0.25	0.17 (n.s.)
Family communication	-0.16 (n.s.)	-0.40	0.23	-0.21	-0.14 (n.s.)	-0.10 (n.s.)	-0.06 (n.s.)	0.03 (n.s.)	0.04 (n.s.)	0.37
Family cohesion	-0.65	-0.37	0.49	-0.24	0.14 (n.s.)	-0.32	-0.23	-0.09 (n.s.)	-0.14 (n.s.)	0.22
Directive leadership	-0.24	0.10 (n.s.)	0.17 (n.s.)	-0.09 (n.s.)	-0.19 (n.s.)	-0.25	-0.01 (n.s.)	-0.31	-0.24	-0.38
Expressiveness	-0.71	-0.39	0.59	-0.05 (n.s.)	0.97 (n.s.)	-0.35	-0.22	-0.22	-0.16 (n.s.)	0.21
	N = 71									
	** Beavers and Hampson, 1990									

n.s. = not significant.

Table 14. Correlations between the SFI, FES, FAD, and FACES family assessment instruments (continued)

	FAD**						
SFI	Problem Solving	Communication	Roles	Affective Responsiveness	Affective Involvement	Behavior Control	General Functioning
Family health	0.55	0.58	0.47	0.64	0.54	0.08 (n.s.)	0.77
Conflict	0.29	0.38	0.33	0.41	0.53	0.14 (n.s.)	0.53
Family communication	0.20 (n.s.)	0.35	0.11 (n.s.)	0.07 (n.s.)	0.24	-0.21	0.27
Family cohesion	0.45	0.57	0.29	0.61	0.30	-0.11 (n.s.)	0.61
Directive leadership	0.27	0.18 (n.s.)	0.34	0.13 (n.s.)	0.29	0.36	0.27
Expressiveness	0.62	0.63	0.48	0.69	0.43	0.12 (n.s.)	0.68
	N = 71						
	** Beavers and Hampson, 1990						

n.s. = not significant

Table 14. Correlations between the SFI, FES, FAD, and FACES family assessment instruments (continued)

	FACES*			
	Adaptability		Cohesion	
SFI	II	III	II	III
Family health	-0.79	-0.22	-0.93	-0.78
Conflict	-0.55	0.02 (n.s.)	-0.69	-0.45
Family communication	-0.30	-0.17 (n.s.)	-0.12 (n.s.)	-0.18 (n.s.)
Family cchesion	-0.59	-0.17 (n.s.)	-0.81	-0.67
Directive leadership	-0.49	-0.39	-0.62	-0.37
Expressiveness	-0.35	-0.18 (n.s.)	-0.58	-0.73
	II - N = 279 III - N = 71			
	* Hampson, Hulgus, and Beavers, 1991			

n.s. = not significant

Chapter VII

SOCIAL FUNCTIONING AND SOCIAL SUPPORTS: A REVIEW OF MEASURES SUITABLE FOR USE WITH SUBSTANCE ABUSERS

Helen Orvaschel, Ph.D.

Introduction

Adequate measurement of social supports and functioning is necessary for treatment planning, evaluation, and prognosis in any patient population. The need is particularly important with substance abusers, because many such patients must resolve difficulties in these interpersonal domains before there can be adequate commitments to and progress in treatment. For both the researcher and the clinician, standard and well-normed assessments of patients' support systems and social functioning will yield a workable database that can provide baselines for treatment planning, reasonable expectations of client progress, and yardsticks against which to compare outcome data.

This chapter provides a review of measures of social functioning and/or social supports that are suitable for clinical or research use with substance abusers. The measures included are not an exhaustive list of what is available but, rather, are representative of assessment instruments in their fields. The measurements discussed have been selected because of their suitability or prior use with a substance abuse population. Hopefully, reviews such as this will stimulate work in these fields of assessment by encouraging investigators to further develop and refine measures which currently are lacking.

Defining Social Functioning and Social Supports

Many concepts of social functioning exist in the literature. For example, Myrna Weissman (1975) has defined social functioning or adjustment as the ability of the individual to perform in roles he or she is expected to fulfill. Barrabee and colleagues (1955) considered social functioning/adjustment as the degree to which the individual fulfills the normative expectations of behaviors associated with his or her social roles. Both these definitions indicate that social functioning must be considered as a multidimensional concept, since every person occupies several roles in society (e.g., parent, spouse, worker).

Inasmuch as functioning is externally judged, it provides an index of the adaptive fit of the individual within the norms of the social system. However, the internal component of satisfaction must be considered if stability or growth is to be expected. Therefore, social functioning may be viewed as a process that evolves over time. For the purposes of this review, social functioning is considered in terms of the individual's interactions with the environment, satisfaction with these interactions, and the degree of success with which the person fulfills the expectations of his or her social roles. This view includes both the internal (i.e., satisfaction) and the external (i.e., success) components of social functioning, as well as the multidimensional aspect of specific interpersonal role assessment.

The construct of "social support" refers to those relationships available to an individual which provide assistance during times of need. An individual may need money, love, help in solving a problem, someone to talk to, sympathy, spiritual guidance, a dinner companion, or a job. No one person should be expected to fulfill all of those needs for another. Therefore, the adequacy of an individual's social supports can be considered a function of the number of available persons and the diversity of needs which such persons can meet.

Social bonds and social networks are alternative terms for "social supports." Social bonds are viewed as the range of relationships connecting an individual to a primary group. These bonds have often been found to be less adequate in psychiatric groups than in non-patient groups (Henderson 1980). The term "social networks" is more general in that it provides a structural framework for examining support systems and other relationships. In this framework, positive relationships are viewed as providing support while negative relationships are seen as invoking stress (Hammer 1981).

Much of the work on social support measurement comes from research examining the mediating effects of external stress on psychiatric symptoms. Social support is viewed as a buffer (that can be altered) between life events (that cannot be controlled) and functioning. As a buffer or moderator, social support has been found to be an important variable in reducing the effects of stress. In fact, numerous reports indicate a relationship between the availability of social supports and reduced functional impairment or psychiatric disorder in individuals exposed to crises or various forms of life stress (Andrews et al. 1978; Cobb 1976; Eaton 1978; Finlay 1966; Lin et al. 1981; Tolsdorf 1976). Of the numerous potential relationships in any given network, the availability of an intimate (or spouse) is often considered the most influential for moderating psychiatric distress (Finlay 1966; Silberfield 1978).

Social functioning and social supports are different but related constructs, particularly with regard to treatment planning and outcome evaluation. Both constructs should be measured over time, because both have a profound association with functional impairment, coping ability, and long-term prognosis. While social functioning is generally an outcome variable, social support is a mediator between a precursor and an outcome. The well-documented role of social support in reducing the effects of stress has implications for crisis intervention and the improvement of psychological and social functioning. Therefore, the assessment of social support is important for treatment planning that focuses on increasing and improving networks and support systems.

As indicated above, social supports and social functioning are related, and sometimes overlapping, constructs. For example, marital satisfaction may be an index of social support or a measure of social functioning. The same is true for variables such as work or income. In addition, it is difficult to determine whether social support is the cause or the effect of a positive outcome. This is another reason for measuring social support, as well as social functioning, over time.

Review of Measures

Instruments that assess social functioning should include, but need not be limited to, the following areas of measurement: work, friends, primary and extended family, and leisure time. Social support measurement also should cover a range of domains, including spouse (intimate), parents, other relatives, friends, community services, employment, education (skills), financial resources, and religious involvement.

Five instruments have been included for review. Three are measures of social functioning, one is a measure of social support, and one includes items relevant to both social functioning and social support. These instruments were selected because of their prior use with substance abusers or their perceived potential with this population. Some measures were excluded from review because they did not cover adequately the behavioral domains of interest, because they lacked a scoring system or method of comprehending the acquired scale results, or because available psychometric data were insufficient. Many measures of social support were unavailable for review because they were in preliminary stages of development or pertained to the needs of a specific research project. In fact, many studies utilize informal scales to measure social support; respondents are asked about the extent of their interactions with family, friends, neighbors, et cetera, and their satisfaction with these interactions.

The discussion that follows covers five instruments: Addiction Severity Index (ASI); Social Adjustment Scale (SAS); Substance Abuse Problem Checklist (SAPC); Information Form on Family, Friends and Self (FFS); and Social Relationship Scale (SRS). The instruments will be described according to their purpose, informant, method of administration, characteristics, content, and psychometric properties. For the social support measures, the number of items is not specified, since the scales include more open-ended questions which require respondents to list people rather than answer specific questions. All five instruments are pre-coded and utilize a scoring system that enables users to interpret results. Summary information on each instrument is presented in table 1. An indication

Table 1. Summary of social functioning and support measures

	Instrument[1]				
Components	ASI	SAS-SR	SAPC	FFS	SRS
Purpose:					
Social Functioning	X	X	X	X	
Social Support				X	X
Method:					
Inventory		X	X		
Interview	X	available		X	X
Scale Properties:					
Number of Items	147	42	377	82	NA
Time Period Assessed	past month	past 2 weeks	current	current	current
Completion Time	30 mins.	20 mins.	40 mins.	NS	NS
Pre-coded	X	X	X	X	X
Scoring System	X	X	X	X	X
Age Range	adults	adults	adults	13-17 yrs.	adults
Informant:					
Patient/Client	X	X	X	X	X
Other	X	X			
Content:					
Family	X	X		X	X
Work/School	X	X	X	X	X
Health	X		X		X
Psychological	X		X	X	
Social	X	X	X	X	X
Religious			X		
Legal	X		X	X	
Leisure		X	X		X
Psychometrics:					
Reliability	X	X	X	X	X
Validity	X	X	X	X	X
Norms	X	X			X

[1] ASI, Addiction Severity Index; SAS-SR, Social Adjustment Scale (self-administered version); SAPC, Substance Abuse Problem Checklist; FFS, Information Form on Family, Friends and Self; SRS, Social Relationship Scale.
NA = Not applicable.
NS = Not stated in the referenced material.

on the table of either reliability or validity does not imply that the measure is either reliable or valid. It means only that reliability and/or validity data have been reported for that measure.

Addiction Severity Index (ASI)

The ASI was developed to provide clinical staff with an individualized patient profile of common treatment problems (McLellan et al. 1980). It examines problems and their severity in six areas of functioning:

- chemical abuse,
- medical,
- psychological,
- legal,
- family/social, and
- employment/support.

The index also elicits general demographic data. It is administered by trained technicians in a relatively structured interview format. A brief instruction manual is available, which describes the interview's structure, administration, scoring, and conversion to a followup interview.

The ASI comprises approximately 147 items (problems). It is scored by the clinician on the basis of data obtained not only from the patient, but also from "objective" sources (i.e., test results, physical examinations, laboratory reports). The patient is asked to represent the extent to which he or she was bothered by each problem or feels treatment is needed for each by rating each problem on a 5-point scale that ranges from "0" (not at all a problem) to "4" (extremely). The time frame for questions is the previous 30 days. Interview administration time is approximately 25 to 30 minutes, and the index can be computer scored (McLellan et al. 1979). Severity ratings for each problem area are based on combined information from the patient and other "objective" sources. Interviewers rate each of the six areas on a 10-point scale (0-9) to represent the extent to which additional treatment is needed for that area of functioning. Higher scores are indicative of greater severity. The index may be useful for admission evaluation, treatment planning, and assessment of treatment outcome.

The ASI has been administered to a large number of substance abusers and is normed on male veteran alcoholics and drug addicts. Composites were created for the index from sets of single items within each problem area as another means of examining ASI scores. Four to six items from each area, with a reliability coefficient of 0.73 or greater, were selected, resulting in the following seven composites: medical, employment, drug use, alcohol use, illegal activity, family relations, and psychiatric status. Validity and reliability data also have been reported for the ASI (McLellan et al. 1980; McLellan et al. 1985). Scale scores have been correlated with independently collected information related to each problem area and have provided face validity coefficients ranging from 0.43 to 0.72. Good concordance was found between the ASI and relevant subscales of the Social Adjustment Scale and the Cornell Medical Index. Inter-rater reliability scores ranged from 0.89 to 0.92; co-ratings provided a mean reliability coefficient of 0.89; and test-retest reliability on a small number of subjects was quite good.

With regard to limitations, use of the ASI is restricted to older adolescents and adults. Also, the authors note that the information on medical and psychological problems is less detailed and sensitive than that obtained from other areas of the index. At the time of this review, no information was available on followup use of the ASI, and no discriminant validity data had been reported. Overall, however, the ASI provides an adequate measure of social functioning appropriate for use with substance abusers. While the areas of functioning covered in the scale are not comprehensive, they do serve to focus attention on the problems commonly found in the population of interest.

Social Adjustment Scale (SAS)

The SAS was developed to obtain information on the functional impairments of depressed patients. Since its construction, the SAS has been used extensively on a number of other populations, including community samples, alcoholics, schizophrenics, and opiate addicts. Its original design was as an interview administered by trained clinicians; however, a self-administered version (SAS-SR) has been well tested and compares adequately with the interview form (Weissman et al. 1974; Weissman and Bothwell 1976; Weissman et al. 1978). The remaining discussion here focuses on the self-administered version of the SAS.

The SAS-SR consists of 42 items that assess functioning and satisfaction in the following categories:

- work (including housework) or school;
- leisure time;
- extended family, spouse, and children; and
- financial.

Questions are rated by respondents on a 5-point scale; data on patients' functioning also may be obtained from their significant others. The SAS-SR provides an overall adjustment score which is the mean of all the items rated on that subscale. The subscale scores available include work outside home, work at home, work as a student, social and leisure, extended family, marital, parental, family unit, and economic. A manual is available in which the administration, scoring, and interpretation of the instrument are described. Reviews and descriptions of the SAS and related instruments also have been published (Weissman 1975; Weissman et al. 1981).

As mentioned above, the SAS-SR has been administered to large numbers of subjects with diverse backgrounds or psychiatric status. Patients' ratings have been found to agree strongly with those of their spouses or other family members, indicating good inter-rater reliability. The instrument is internally consistent, with a mean alpha coefficient of 0.74; test-retest reliability is reported at 0.80 (Weissman et al. 1981). Indices of validity reported for the SAS-SR indicate that it can discriminate not only between patient and non-patient samples, but also between patient groups with different diagnoses. Further, it has been demonstrated to be sensitive to change when administered over time. Since it has been used with community-based, non-patient samples, normative data are available for comparison with data obtained from patient populations.

The SAS-SR is a good measure of social functioning and can be easily administered and scored. Its demonstrated sensitivity to change makes it useful as a treatment outcome measure. Also, it is one of the few instruments available for which community-based norms exist. This fact, as well as the extensive psychometric testing performed, makes the SAS-SR an important research tool.

Substance Abuse Problem Checklist (SAPC)

The SAPC was designed to obtain information on the functional impairments of substance abusers that would be useful to treatment planners. The SAPC is organized into eight categories:

- motivation for treatment (17 items);
- health (75 items);
- personality (96 items);
- social relationships (50 items);
- job (52 items);
- leisure time (43 items);
- religious/spiritual (26 items); and
- legal (18 items).

It is a self-administered questionnaire and is completed by patients within days of admission to treatment. A brief instruction manual is available in which the design, administration, use in treatment and research, interpretation, and psychometric properties of the checklist are described.

The SAPC comprises 377 items that describe problems considered "typical" of substance abusers. Patients are asked to underline the number of an item if they have that problem and to circle those they consider "especially troublesome." Following these 377 items are three open-ended questions that ask patients to state which problems have the most to do with their substance abuse, which they are willing to work on in treatment, and which they should work at first. The time frame for questions, while unspecified, can be assumed to be current. Completion time is reported to be between 30 to 40 minutes, and the instrument can be administered to groups or individuals by clerical staff (Carroll 1984).

The SAPC has been administered to 589 adult substance abusers. A principal component analysis yielded 52 orthogonal factors considered useful in subsequent data analysis (Carroll and Chambliss 1985). The checklist is reported to have content validity, since it includes items most frequently reported by substance-abusing patients to treatment staff in an in-patient hospital program (Carroll 1983). Response consistency or test-retest reliability ranged from 85 to 95 percent. A comparison of the scores of alcoholics, drug users, and a group of users of both alcohol and drugs found that the last group scored higher on total number of problems and had more job-related problems and more social anxiety than the first two groups. No normative data were reported.

Overall, the SAPC is an easily administered checklist appropriate for use with adult substance abusers. The number of factors (52) reported from the principal components analysis is excessive, and several could be dropped or incorporated into larger factors (e.g., smoking, drinking coffee). However, more useful factors have been found (e.g., loneliness, alienation from spouse) that reflect important areas of functional impairment. The SAPC does provide a standard assessment of social functioning problems characteristic of substance abusers and, as such, provides useful information for treatment planning.

Information Form on Family, Friends and Self (FFS)

The FFS is a subset of the Prevention/Intervention Management and Evaluation System (PMES), an information collection and monitoring system used in drug programs all over Texas. The PMES, in its entirety, yields a great deal of basic demographic information. The FFS was designed to assess the characteristics of clients' families, peer relations, and internal (satisfaction) status. It is organized into three sections:

- Family Environment and Relations (7 scales);
- Peer Activities and Culture (5 scales); and
- Psychological Status (4 scales).

The FFS information is obtained by counselors in an interview format, generally 1 to 2 weeks after admission. A manual of instructions is available as part of the PMES guide; it provides the history of the form and other information on administration and interpretation of scores.

Item development for the FFS was based originally on *a priori* considerations regarding dimensions considered important in an adolescent drug population. The current 82 items of the interview represent a reduction of the original pool as the result of a principal component analysis that yielded interpretable components with good psychometric properties. In the FFS interview, patients are asked to rate questions on a "1" to "5" scale for "never" to "almost always" or "very unhappy" to "very happy." The time frame for questions, while unspecified, can be assumed to be current. No estimate of completion time for the interview is offered. The seven family scales include control, consistent parenting, conflict, trust and understanding, care and support, contact, and affiliation. The peer activity scales include peer activity level, peers' legal involvement, peers' school problems, peers' familiarity with parents, and peers' conventional involvement. The psychological status scales include self-esteem, social satisfaction, material satisfaction, and school and job satisfaction (Santos de Barona and Simpson 1984).

The FFS has been administered to adolescent drug abusers, and their responses have been examined for internal consistency within scales and intercorrelations between scales. Scales were found to be internally consistent, with alpha coefficients ranging from 0.56 to 0.87. Many of the scales were found to be statistically independent, although a few intercorrelations were noted (Hater and Simpson 1981).

The FFS is one of the few measures of social functioning appropriate for use with an adolescent substance-abusing population. Its wide use as part of the PMES provides a large database against which comparisons can be made with data from other research and clinical projects. The questions dealing with satisfaction and affiliation provide some index of both social support and social functioning, and the scales do demonstrate face validity. Additional psychometric testing of the measure in its current form is needed for a more confident application to longitudinal research.

Social Relationship Scale (SRS)

The SRS was developed to assess the buffering effects of social supports on life stressors as they affect health (McFarlane et al. 1981). The focus of the SRS was to include items that would encompass all categories of stress and to assess the number, type, and quality of relationships available for each category. The categories of stress included in the scale are work, money and finances, home and family, personal and social, personal health, and "issues related to society in general."

Respondents are asked to list individuals, their relationships to them, and the individuals with whom they discuss each problem area and to rate on a 7-point scale the helpfulness of the discussion with each person. They are also asked to indicate the reciprocity of the relationship by listing those who come to them for similar discussions. Respondents then note key people whom they ask for help when in crisis and the reciprocity of this relationship. The SRS is scored by noting the total number of individuals in the network, the number in each type of relationship (e.g., family, friend), and the quality of the network (e.g., helpfulness, proportion of helpful individuals, number of key figures). It is administered by trained interviewers in interview format. The time period assessed, though unspecified, appears to be current. No estimates of completion time are provided.

The SRS is reported to have content validity on the basis of reviews by an expert panel. In addition, it has been shown to discriminate between two groups—those with versus those without a family problem—and hypothesized differences in family support have been confirmed. Test-retest reliability ranged from 0.62 to 0.99 (median = 0.91) for the number of individuals listed, and from 0.54 to 0.99 (median = 0.78) for the helpfulness scores. Response bias (social desirability) was also tested and was not found to be present. Use of the SRS with a large sample (n = 518) of general population subjects provides normative data for researchers interested in comparing the available social support findings with those obtained from specific patient samples. However, the SRS has not yet been used with substance-abusing patients and should be tested with such a group prior to a final determination of its applicability and usefulness with this population.

Conclusion

The information assessed in the five instruments reviewed is important from both a research and a clinical perspective. The systematic assessment of social functioning and social supports will provide a means for evaluating and ultimately predicting the success of any intervention program. While measurement of these areas of behavior is considered essential, the method of assessment ultimately must be the choice of the investigator. No one measure can meet all the needs of a field of study. Therefore, selection of appropriate assessment tools must be based on the population to be studied, the uses to which the data are put, and the practical needs of the investigator conducting the research. Investigators are encouraged to modify, refine, and develop the tools needed to meet the goals of their programs. It is hoped that the measures reviewed here provide a useful starting point for the attainment of these goals.

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Chapter VIII
FUTURE DIRECTIONS IN THE DEVELOPMENT OF ADDICTION ASSESSMENT INSTRUMENTS

Arthur MacNeill Horton, Jr., Ed.D.

Introduction

The preceding chapters of this publication accurately describe the current status of addiction assessment instruments in the United States today. This chapter suggests some areas for additional development and offers a few speculations regarding possible future accomplishments. Some preliminary work supported by the National Institute on Drug Abuse (NIDA) is described briefly.

At this point, it should be clear that there is a degree of agreement among knowledgable researchers in the field of drug abuse treatment regarding appropriate diagnostic instruments. As observed by Dr. Rounsaville (this publication), there are obvious advantages to the use of comparable measures and methods in drug abuse research. Just a few of these advantages are the ability to evaluate treatment techniques and to determine trends in the incidence of various types of substance abuse.

Another area of agreement concerns comprehensive assessment. Simply put, diagnostic assessments must cover a number of important domains of interest. For example, this publication has been designed to include the domains of:

- Demographic Characteristics, Employment History, and Legal History
- Alcohol and Drug Use History
- Medical History
- Psychiatric History
- Family Functioning
- Social Adjustment and Social Supports

Other authors might have selected one or two different areas, but to a great extent most experienced professionals in the drug abuse treatment research field would agree that these areas are important and should be included in any comprehensive assessment of substance abusers. Indeed, in some cases the omission of an area (e.g., medical history) could be tantamount to malpractice and would subject the responsible practitioner to legal sanctions.

This agreement upon the value of comprehensive assessment is illustrated, further, by its acceptance in institutional accreditation criteria for hospitals and rehabilitation facilities in the United States. Already, some efforts have been devoted to develop a single procedure to screen a reasonably wide group of problem domains.

Researchers at the University of Pennsylvania and the Philadelphia Department of Veterans Affairs Medical Center have devised such a procedure (McLellan et al. 1980). Essentially, they devised a structured clinical interview to assess a number of domains—the Addiction Severity Index (ASI).

The objective of the ASI is to produce a problem severity profile of each patient through an analysis of six general areas that are problems often reported in drug abuse treatment settings: Medical Status, Employment Status, Drug/Alcohol Use, Legal Status, Family/Social Relationships, and Psychological Status. Severity of the problem for the ASI is defined by the "need for additional treatment," and the determination of severity is estimated by the number, duration, and intensity of problem symptoms (McLellan et al. 1980). The ASI (described in the chapter by Babor in this publication) has the important advantage of covering multiple dimensions of a patient's functioning.

A major contribution of the ASI has been to help focus the attention of addiction researchers on the concurrent assessment of multiple problem domains. Indeed, the great success of the ASI has encouraged other drug abuse researchers to devise procedures to assess a number of problem domains at the same time.

Many insights have been gained from this line of work, and these insights can be expected to produce significant advances in the near future.

Drug Abuse Treatment Outcome Study (DATOS)

NIDA has addressed the issue of development of methods for the concurrent assessment of multiple problem domains in part through the Drug Abuse Treatment Outcome Study (DATOS). DATOS has been funded by a contract between NIDA and the Research Triangle Institute (RTI). In 1989, NIDA awarded a contract to RTI to conduct a cohort-based, prospective drug abuse treatment outcome study. DATOS will utilize a total sample of 20,000 adult drug abuse clients across 80-100 treatment programs to assess client characteristics and social functioning at admission for drug treatment. Clients will be followed at specific times throughout the course of treatment. A sample of 4,500 clients will be followed after termination of treatment to assess post-treatment outcomes.

DATOS research will extend and augment the findings of previous large multi-site longitudinal research studies, such as the Drug Abuse Reporting Program (DARP) and the Treatment Outcome Prospective Study (TOPS). An important aim of DATOS from the beginning has been the assembly and organization of a standard "state of the art" clinical research assessment battery to evaluate multiple problem domains of drug abuse clients in treatment settings.

Additional goals of DATOS have been to conceptualize and measure client impairment and to determine the relationship between the severity of impairment and outcome during and after drug abuse treatment. To pursue these objectives DATOS has devoted extensive effort to the production of clinical assessment instruments for research. An expert panel of assessment specialists was formed during the first year of the DATOS study to assist in this task. The work group experts included Drs. Carl Botterbusch, Howard Goldman, MacNeill Horton, Marvin Krohn, Juan Mezzich, Kenneth Winters, George Woody, and Edward Yelin. Their purpose was to suggest instruments and procedures to measure the degree of impairment and the severity of drug abuse in clients. The group met for two days in the spring of 1990 in Baltimore, Maryland, at NIDA's Addiction Research Center and made recommendations to RTI and NIDA staff. Based on these expert recommendations, RTI staff developed the current DATOS clinical assessment system under NIDA supervision.

Considerable progress has been made in the past 2 years. DATOS instrumentation was field-tested in a vocational training/employment research demonstration grant for methadone maintenance clients and in a cocaine research demonstration study in Washington, DC. Four separate instruments were developed for the DATOS project:

- Intake I—Pre-treatment Psychosocial History Interview
- Intake II—Clinical Assessment Battery
- Intreatment—Treatment Experience Interview
- Posttreatment—Followup Interview

The first two instruments are described briefly here. It should be noted that, currently, these first two instruments have been intermingled to a great extent. Each instrument is of 60-90 minutes duration and is designed to be administered in a face-to-face format by a trained professional research interviewer.

Pre-treatment History Interview

The Pre-treatment Psychosocial History Interview has been designed as an intake interview to obtain baseline data on various sociodemographic characteristics and problem domains. Selection of items was based on the following guidelines:

- Use of procedures in common use to allow comparison with other studies (see Rounsaville, this publication); and
- Measurement of multiple problem domains and outcomes.

Sections in the interview include:

- Demographic characteristics
- Reasons for entering treatment and past treatment experiences
- Living arrangements and lifestyle
- Drug and alcohol use
- Drug and alcohol use-related problems
- Criminal justice involvement
- Employment
- AIDS knowledge and behavior

Items were drawn from the ASI, the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer et al. 1989), the National Health Interview

Survey (NHIS), and other well-known instruments.

Clinical Assessment Battery

The next DATOS instrument to be described, the Clinical Assessment Battery, was designed to capture the critical data items needed for diagnostic purposes. This instrument has been designed to assess the most common comorbid conditions in drug abuse treatment populations: depression, anxiety, and antisocial personality disorder. Portions of the Composite International Diagnostic Interview (CIDI) (Robins et al. 1989) are used in this section. In addition, the Clinical Assessment Battery is intended to be administered 1 week after the patient's admission into treatment. Procedures were selected based on previous reviews of assessment procedures in drug and alcohol research (see Rounsaville, this publication), standardized administration format, and demonstrated test-retest reliability and criterion validity. Specific domains include:

- Drug and Alcohol Dependence
- Psychiatric Diagnosis and Psychological Impairment
- Physical and Mental Functioning
- Social Functioning

The Drug and Alcohol Dependence items are also drawn from the CIDI (Robins et al. 1989). This diagnostic interview was developed by the World Health Organization (WHO) for international assessment of psychiatric and substance abuse conditions.

The Psychiatric Diagnosis and Psychological Impairment items are focused on the three most common comorbid psychiatric conditions, which are assessed by a number of items drawn from previous studies and some devised by RTI for DATOS. The level of psychological impairment is assessed by a short self-report psychological test, the Symptom Check List-90 Revised (SCL-90R). Also, the Socialization (So) scale from the California Psychological Inventory (CPI) and some selected CIDI items are included.

Measures of Physical and Mental Functioning were also selected for inclusion. For this task, selected items from the 1986 National Health Interview Survey (NHIS) were included. Also, the Trail Making Test (TMT) (Reitan 1958; Horton 1979), a well-known neuropsychological screening test, was included. Further comments on this test are provided later in this chapter. Social functioning assessment items were taken from a large number of sources, including the NIDA-funded Treatment Outcome Prospective Study (TOPS) and the Epidemiological Catchment Area studies sponsored by the National Institute of Mental Health (NIMH).

DATOS Family of Instruments

DATOS was designed as a clinical research program with a major emphasis on assessment of drug addicts. The DATOS instrumentation requires a number of hours of structured interviews for complete administration of the Pre-treatment History Interview and Clinical Assessment Battery. Because of the amount of time and training necessary to administer these extensive research instruments, they are not appropriate for routine clinical use in most programs. Abbreviated core sections can be adapted, however, for use as short forms. This approach has encouraged the development of a DATOS "family" of instruments focused upon special needs of various researchers.

For example, the Individual Assessment Profile (IAP), another new clinical assessment tool, actually is a child of DATOS as it was created from a subset of DATOS items. The IAP was a modification in content and format for intake workers or clinical staff in community-based programs. Most State and Federal respondent data elements can be derived for the IAP. This instrument is currently in use in a number of government research projects sponsored by both NIDA and the Office for Treatment Improvement (OTI). The Clinical Assessment Profile (CAP) is another, more comprehensive version developed for a NIDA study of methadone treatment quality assurance.

It should be noted that these comments are intended to describe only the most critical elements of this particular assessment procedure. They are not intended to be a complete description. (For more information, please write to Frank M. Tims, Ph.D., or Bennett W. Fletcher, Ph.D., Treatment Research Branch, NIDA, Rm. 10A-30, 5600 Fishers Lane, Rockville, MD 20857.)

Cognitive Assessment Issues

A particularly noteworthy feature of the DATOS instrumentation has been the provision for neuropsychological screening of the cognitive consequences of drug abuse. This aspect of the DATOS assessment tools illustrates some very noteworthy assessment features. Previous research assessment tools to a large degree have neglected the very important area of neuropsychological screening. It could be said that the degree to which various treatment strategies can interrupt a pattern of drug dependence and abuse may depend upon the cognitive capacity of the client. Two pieces of information are particularly important in terms of assessing the cognitive consequences of drug abuse. For example, in the *Diagnostic and Statistical Manual*, 3rd edition revised, of the American Psychiatric Association (DSM-III-R), the section on "Organic Mental Syndromes and Disorders" demonstrates that when one excludes alcohol, there are relatively few recognized psychiatric syndromes in drug abuse associated with cognitive impairment. Simply put, only a handful of organic mental syndromes are associated with illicit drug use.

Another document of particular interest is an excellent review on the "Neuropsychology of Alcohol and Drug Use" by Parsons and Farr (1981). In that review, they carefully examined a number of studies that utilized the state of the art of neuropsychology test instruments used in the clinical assessment of drug addicts. The final result was that the objective evidence of impairment for most drugs was only of a very mild degree. The one exception to this trend, however, was of patients who were polydrug abusers. Briefly put, polydrug abuser patients showed much more convincing objective evidence for neuropsychological impairment than patients who abused a single substance. While evidence for gross impairment was lacking, however, there were some interesting patterns of subtle impairment demonstrated on certain neuropsychological tests. These patterns included measurements that assessed simple motor function, attention and concentration skills, higher level visual concept formation, and rapid set-shifting abilities. Recent research, conducted since the Parsons and Farr (1981) review that has evaluated chronic cocaine abusers (O'Malley and Gawin 1990), has found results similar to those previously documented with polydrug abusers. These findings provided the clinical context for the development of the DATOS cognitive functioning assessment section.

Trail Making Test

In the DATOS model, a screening procedure for the assessment of neuropsychological function in drug addicts was proposed. Given that only a very limited amount of time was available (10 minutes) and the fact the instruments were to be administered by B.A. level technicians, it was decided to utilize the Trail Making Test (TMT), a well-known measure in neuropsychology (Reitan 1958; Horton 1979). The TMT has often been used as a screening device. In this case it was decided to use a branching decision-tree procedure. In brief, other tests would be administered based on the patient's performance on the TMT. The TMT would be used as the first measure administered and then, depending on the patient's performance, a second assessment tool would be utilized. Should the patient do well in the TMT, then the next test would be the Shipley Institute of Living Scale (SILS) (Shipley 1967), which measures both vocabulary and abstraction abilities. Should the patient do poorly, the Mini-Mental State Examination (MMSE) (Folstein et al. 1975) would be used. The MMSE is a well-known measure particularly suited for patients with moderate to severe cognitive impairment. In the most recent version of the DATOS, however, it was decided to eliminate the SILS due to time constraints.

Adaptive Testing Model

An advantage of this particular framework for clinical assessment is that it would be possible to rapidly determine where, on a spectrum ranging from severely impaired to quite mentally able, a drug abuse patient would fall. The "Adaptive Testing" model used is one that can quickly determine whether the patient either is demonstrating a serious degree of cognitive impairment or has exceptionally good mental abilities. One hope is that other assessment areas could follow this model of testing specific areas based on the patient's individual responses. In addition to rapidly gaining information, this model reduces the response burden on the patient, as less time and effort are needed on the patient's part to provide the information required for evaluation.

Future Developments

While the DATOS instrumentation is still in the field testing stage, it is a potential bright star on the horizon with respect to data collection from addiction clients. The DATOS study is ongoing, and in the next few years it is expected to provide an evaluation of the validity and reliability of the DATOS data collection instruments as an integrated system for research with drug addicts in treatment.

New Technologies

While the DATOS instruments will prove to be valuable or not in the next decade, other methodological diagnostic innovations also show great promise. Emerging technologies such as the use of Positron Emission Tomography (PET) scanning (Volkow et al. 1991) to study drug abusers are exciting yet will need much additional work and many years of effort before they will be applicable to routine clinical care. Also, the use of computer technology to administer both lengthy clinical history questionnaires and neuropsychological test batteries may provide many exciting opportunities. In addition to improving the speed and accuracy of data collection, computer administration offers additional advantages. For example, the questions to be asked could be designed to change in complex ways based on prior responses. Also, there may be opportunities to develop new computer-based performance measures to assess various aspects of mental functioning. A crucial task in this effort will be the further development of culture-fair assessment procedures.

New Populations

Some consideration should be given to the probability that the future will bring new populations of addicts to the drug abuse field, with attendant diagnostic problems. One might reflect that a dozen years ago, it would have been most difficult to predict the extent of the cocaine epidemic in the United States in the late 1980's. Even more serious today, however, is the issue of the diagnosis of drug addicts who are HIV-positive. There are indications that the cocaine epidemic may have abated; but the worst of the AIDS crisis is yet to come.

While there have been some efforts to gauge the subtle neuropsychological changes that are AIDS-related (Butters et al. 1990; Hanscom and Horton 1989) in the general population, there has been little work specifically directed toward drug abusers. Drug addicts who are HIV-positive can be expected to be a group with their own unique set of diagnostic problems.

It could also be suggested that new drugs of abuse could be developed in the coming years. What they will be can only be left to chance, but the strong likelihood is that new agents will be available for abuse. Also, already recognized drugs could be abused in new ways. For example, there have been reports that new methods now allow heroin to be smoked or sniffed. The future will tell if this new route of ingestion produces a greater intensity of addiction.

New Concepts

Science is rarely stable, and the addiction field might be expected to see a degree of conceptual evolution. Clearly, the old distinction between abuse and dependence has become quite inadequate as a way of categorizing an addict's behavior. The time is ripe for a more differentiated paradigm of addiction to be developed.

Also, in the decade of the brain, surprisingly little attention has been focused upon neuropsychology, neurology, and neuroanatomy as models to understand addictive behaviors. One exciting concept that could have implications for the addiction field is that of "subcortical brain damage" (Cummings and Benson 1984). Very much oversimplified, the concept of subcortical brain injury suggests that different behavioral changes will appear based upon damage in either the "cortical" or "subcortical" areas. It is possible that the mildness of cognitive deficits seen in many drug abuse patients could be due to on overreliance upon "cortical" biased neuropsychological assessment tools. Further research is needed to evaluate this notion.

Conclusion

This chapter discusses some NIDA-funded research on the clinical assessment of drug addicts. The major focus is on the DATOS model of assessment. Within the DATOS model of assessment, special attention is devoted to the evaluation of cognitive functioning by neuropsychological testing. The advantages of an "adaptive testing" model are also described. In addition, some speculations concerning new technologies, new populations, and new concepts in drug abuse are offered.

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Author

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Appendix A
TCU/DATAR PROJECT FORMS

TCU/DATAR PROJECT --
CLIENT IDENTIFICATION FOLDER FOR FOLLOW-UP

[NOTE TO INTERVIER: This form is to be completed at the time of Client Intake and will be used to help relocate clients for follow-up interviews. File it in permanent and secure storage as part of the client files -- DO NOT SEND IT TO TCU! Make updates to information as needed (including date of entry and signature of person recording changes).]

FOR CORRESPONDENCE WITH TCU:

Agency I.D. Number .... |___|___|

Client I.D. Number: .... |___|___||___|___||___|___|

Client Admission Date: .... |___|___||___|___||___|___|
MO DAY YR

CLIENT NAME: ______________________

NICKNAMES USED: ______________________

STREET ADDRESS: ______________________ PHONE: __________

CITY AND STATE: ______________________ ZIP CODE: __________

1. Gender: [CIRCLE ONE] .... 1=Male 0=Female

2. Current Age: .... |___|___|
AGE

   a. Date of Birth: .... |___|___||___|___||___|___|
   MO DAY YR

3. Race or Ethnic Group: [CIRCLE ONE]

   1. African-American/Black
   2. American Indian
   3. Anglo/White/Caucasian
   4. Asian/Pacific Islander
   5. Mexican-American
   6. Mexican National
   7. Other Hispanic
   8. Other

4. Identification Records:

Driver's License # ____________________

Social Security # ____________________

5. Names and addresses of parents or grandparents:
(Include names and addresses of both parents if not living together):

Name: ____________________ Relation: __________
Street Address: ____________________ Phone: __________
City and State: ____________________ Zip Code: __________

Name: ____________________ Relation: __________
Street Address: ____________________ Phone: __________
City and State: ____________________ Zip Code: __________

Name: ____________________ Relation: __________
Street Address: ____________________ Phone: __________
City and State: ____________________ Zip Code: __________

6. Number of Brothers and Sisters: .... |__|__|

a. Full Name of Each	Sex	Age	Living with Parents?*	
____________________	______	______	Yes	No*
____________________	______	______	Yes	No*
____________________	______	______	Yes	No*
____________________	______	______	Yes	No*
____________________	______	______	Yes	No*
____________________	______	______	Yes	No*

* If not living with parents, record address below.

7. Address of other family, relatives, or friends who usually know where you live:

Name: ______________________________ Relation: ____________
Street Address: __________________________ Phone: ____________
City and State: ____________________________ Zip Code: ________

Name: ______________________________ Relation: ____________
Street Address: __________________________ Phone: ____________
City and State: ____________________________ Zip Code: ________

Name: ______________________________ Relation: ____________
Street Address: __________________________ Phone: ____________
City and State: ____________________________ Zip Code: ________

Name: ______________________________ Relation: ____________
Street Address: __________________________ Phone: ____________
City and State: ____________________________ Zip Code: ________

8. Most recent places of employment:

Company Name ________________
Address ____________________
City ________________ State ___
Zip Code _____ Phone __________
Supervisor __________________
Job Title _________ Dates ____ to ____

Company Name ________________
Address ____________________
City ________________ State ___
Zip Code _____ Phone __________
Supervisor __________________
Job Title _________ Dates ____ to ____

9. Hospitalizations since 1985:

Name __________ Address __________ City __________ State ____ Dates ______ to ______	Name __________ Address __________ City __________ State ____ Dates ______ to ______

10. Places incarcerated (jail or prison) since 1985:

Name of Institution __________ Address __________ City __________ State ____ Charge __________ Dates Confined ______ to ______	Name of Institution __________ Address __________ City __________ State ____ Charge __________ Dates Confined ______ to ______

11. Parole or Probation Information (if applicable):

Name of Office ____________________

Parole/Probation Period ____________________

Reason for Parole/Probation ____________________

12. Other special notes or information on client:

____

____

____

____

____

INTAKE FORM

TCU/DATAR Project
Institute of Behavioral Research
Texas Christian University
Fort Worth, TX 76129

CODE 1-5 WITHOUT QUESTIONING RESPONDENT: [FORM 01; CARD 01]

1. [AGENCY I.D. NUMBER] .... |___|___| [5-6]

2. [CLIENT I.D. NUMBER] .... |___|___||___|___||___|___| [7-12]

3. [DATE OF ADMISSION] .... |___|___||___|___||___|___| [13-18]
MO DAY YR

4. [TIME INTERVIEW STARTED -- MILITARY TIME] .... |___|___|:|___|___| [19-22]
HR MIN

5. [CLIENT GENDER] .... 0=Female 1=Male [23]

6. [CENSUS TRACT FOR CLIENT RESIDENCE]
Look at this map and show me the area or neighborhood in which you live. .... |___|___|___|___|.|___|___| [24-29]
CENSUS TRACT NUMBER

READ ALOUD TO RESPONDENT:

This interview is part of the Intake Process for people entering our treatment program. It usually takes a little over an hour to complete, depending partly on how clear and direct you are in your answers. I will be asking primarily about your personal and family background, your friends, your legal involvement, and your drug use history.

It is very important that you be open and honest. Some questions might seem sensitive or embarrassing to you, but they are necessary for us to talk about. What you tell me will help us understand your problems better and plan your treatment here. You have already been told about the privacy and confidentiality of what you say, and you have signed consent forms for the program.

Do you have any questions before we start?

INSTRUCTIONS TO INTERVIEWER: SOME ITEMS IN THIS FORM REQUIRE THAT VERBATIM ANSWERS BE RECALCULATED OR RECODED INTO SPECIFIC UNITS OF MEASUREMENT, SUCH AS "MONTHS" OR "AMOUNTS OF ALCOHOL". PLEASE RECORD RESPONDENT'S ANSWERS VERBATIM AND RECODE THEM AFTER THE INTERVIEW (OR LEAVE THEM FOR THE DATA EDITOR/CODER AT TCU TO COMPLETE). WRITE OUT EXPLANATIONS OF "SPECIAL" ANSWERS OR EXPLANATIONS IN MARGINS NEXT TO QUESTIONS, AND WRITE "NOT ANSWERED" NEXT TO ANY ITEMS THAT RESPONDENT COULD NOT OR REFUSED TO ANSWER.

PART A: SOCIODEMOGRAPHIC BACKGROUND

Let's begin with some general information.

1. What is your current age and birthdate? .... AGE: |___|___| [30-31]

BIRTHDATE: |___|___||___|___||___|___| [32-37]
MO DAY YR

2. What is your race or ethnic background?
[SHOW THIS LIST TO RESPONDENT AND RECORD ANSWER] .... |___| [38]

1. African-American/Black
2. American Indian
3. Anglo/White/Caucasian
4. Asian/Pacific Islander
5. Mexican-American
6. Mexican National
7. Other Hispanic (specify)
8. Other (specify) ________________

3. In what type of place do you currently live? [USE CODE BELOW] .... |___| [39]

1. Your own house or apartment
2. Someone else's house or apartment
3. In a shelter or rooming house
4. On the street/No regular place
5. In jail or prison
6. Other (specify) ______________

4. How long have you been living there (at that place)? .... |___|___|___| [40-42]
# MONTHS

5. Are you living with a spouse or sexual partner? .... 0=No 1=Yes* [43]

*IF "YES", ASK:

a. How long have you been living together (in this relationship)? .... |___|___|___|
# MONTHS

b. How happy are you with the relationship you have with him/her? .... |___|

0. Very unhappy
1. Mostly unhappy
2. Don't know
3. Mostly happy
4. Very happy

[47]

6. Altogether, how many other people live there with you? .... |___|___|* [48-49]
[DO NOT COUNT CLIENT OR SPOUSE OR SEXUAL PARTNER] # PEOPLE

***IF "0", SKIP TO #8**

7. Are you living -- [READ EACH ITEM AND CIRCLE ANSWER]

	NO	YES	
a. with your parents?	0	1	[50]
b. with other adult relatives?	0	1	
c. with children?	0	1	[52]
d. with friends?	0	1	
e. others? (specify) ____________________	0	1	[54]

8. What is your current LEGAL marital status? [USE CODE BELOW] |___| [55]

***IF "1", SKIP TO #9**

1. Single/Never married
*2. Legally married
*3. Living as married (including common law marriage)
*4. Separated
*5. Divorced
*6. Widowed

*IF "EVER MARRIED" (RESPONSE CODE 2-6), ASK:

a. How long have you been (current marital status)? |___|___|___|
# MONTHS

[56-58]

*9. How many times have you ever been married or living as married? |___| [59]
# TIMES

10. How many children do you have? |___|___| [60-61]
# CHILDREN

11. How many years of school have you finished -- that is, what is the highest grade you completed? |___|___| [62-63]
GRADE

12. Have you -- [READ EACH ITEM AND CIRCLE ANSWERS]

	NO	YES	
a. graduated from high school?	0	1	[64]
b. completed a vocational or technical training program?	0	1	
[IF "GRADUATED HIGH SCHOOL", SKIP TO #13]			
c. completed your GED?	0*	1	
d. *[IF "NO", ASK] Are you currently working on your GED?	0	1	[67]

*13. Do you have a current, valid driver's license? 0=No 1=Yes [68]

14. How many different applications for a job have you made in the past 6 months? |___|___| [69-70]
NUMBER

OCCUPATION CODE LIST

(01) Professional or technical (accountant, architect, engineer, lawyer or judge, scientist, doctor, registered nurse, teacher, social worker, writer, entertainer)

(02) Manager and administrator (office manager, sales manager, school administrator, government official, small business owner)

(03) Sales (sales representative, insurance agent, real estate broker, bond salesman, sales clerk or other sales people)

(04) Clerical or office worker (bank teller, bookkeeper, secretary, typist, postal clerk or carrier, ticket agent)

(05) Craft and kindred (baker, carpenter, electrician, bricklayer, mechanic, machinist, tool and die maker, telephone installer)

(06) Operative (assembler, checker, gas station attendant, meat cutter, packer, laundry and dry-cleaning operative, miner operative, welder, garage worker)

(07) Transportation equipment operative (bus driver, cab driver or chauffeur, truck driver and deliveryman)

(08) Nonfarm laborer (construction, freight handler, sanitation worker)

(09) Private household worker (maid, butler, cook)

(10) Service worker (cook, waiter, barber, janitor, practical nurse, beautician, police officer, fireman)

(11) Farmer and farm manager

(12) Farm laborer (foreman, picker)

(20) Military service

[01;02;ID]

15. Have you held a job anytime during the past 6 months? [USE CODE BELOW] ....|___|* [13]

1. Not in labor force--housewife, student, disabled, in jail, etc.
2. No, could not find a job or did not try

*3. Yes, usually at odd jobs (occasional or irregular work)
*4. Yes, usually at part-time jobs (under 35 hours per week)
*5. Yes, usually full-time at a steady job (35 hours or more per week)

*IF "YES" (RESPONSE CODE 3, 4, OR 5), ASK:

a. Are you working now? [USE CODE BELOW] .... |___| [14]

1. No
2. Yes, at odd jobs
3. Yes, part-time at a steady job (under 35 hours per week)
4. Yes, full-time at a steady job (35 hours or more per week)

b. How long have you been working at your current job?
(OR--How long did you work at your last job?) ....|___|___| [15-16]
# MONTHS

c. How many days did you work in the last 30 days? ....|___|___| [17-18]
# DAYS

d. And how many days did you work in the last 6 months? .... |___|___|___| [19-21]
# DAYS

e. What kind of work did you do?
[PROBE TO CODE OCCUPATION -- RECORD CLIENT'S ACTUAL WORDS
What is your job called? What are some of your duties?]

|___|___| [22-23]
CODE #

f. On the average, how many days per week did you work
(during the past 6 months)? ....|_____| [24]
# DAYS

g. And how many hours per day did you usually work? ....|___|___| [25-26]
# HOURS

h. About how much take-home pay
did you usually earn each week?
[PROBE: IS THAT PER WEEK?] .... $|___|___|___|___| [27-30]
WEEKLY INCOME

i. Altogether, how many jobs (i.e., different employers)
have you had in the last 6 months? ....|___|___| [31-32]
# JOBS

16. What were all the different sources of financial support you had during the last 6 months? That is, in how many months did you get any money, food, or other support from --

READ EACH ITEM AND RECORD MONTHS # MONTHS

(1) your job or employment? .... |__| [33]

(2) your mate/spouse? .... |__|

(3) your family or friends? .... |__|

(4) unemployment compensation (for being laid off or injured at work)? .... |__| [36]

(5) welfare or public assistance (food stamps, housing assistance, AFDC, Medicaid, SSI)? .... |__|

(6) prostitution? .... |__| [38]

(7) from any other kind of illegal activities (other than prostitution)? .... |__|

(8) anything else? (specify)________________ .... |__| [40]

17. Which one of these was your major (or largest) source of support in the last 6 months? [USE CODES ABOVE] .... |__| [41]

18. Have you ever served on active duty in the Armed Forces? .... 0=No 1=Yes* [42]

*IF "YES", ASK:

a. How many months were you in the service? .... |__|__| [43-44]
# MONTHS

b. What was the date of your last discharge? .... |__|__| 19 |__|__| [45-48]
MONTH YEAR

c. What type of discharge did you receive? [USE CODE BELOW] .... |__| [49]

1. Still in service
2. Honorable
3. General
4. Medical
5. Undesirable
6. Dishonorable
7. Other (specify) ________________

PART B: FAMILY BACKGROUND

Next, I want to get some information about your family background and relations. First, let me ask some things about your parents.

1. Are both of your (natural or original) parents currently alive?.......MOTHER: 0=No 1=Yes 7=? [50]
FATHER: 0=No 1=Yes 7=? [51]

2. Were they ever divorced or separated from each other? ....0=No 1=Yes* [52]

*IF "YES", ASK

a. How old were you when your parents got a divorce (or separated)?...|___|___|
AGE

[53-54]

3. Which adults (parents, stepparents, grandparents, other) usually lived in your home with you during your childhood? At each of these following ages, did you usually live with your --
[PLEASE CODE ALL ADULTS WHO LIVED IN HOME: CATEGORIES (1)-(4) BELOW]

	Age 1 to 6? (pre-school years)		Age 7 to 12? (early school years)		Age 13 to 17? (teen-age years)	
CIRCLE ANSWERS FOR EACH AGE	NO	YES	NO	YES	NO	YES
(1) mother? (i.e., natural/real)..........	0	1 [55]	0	1 [61]	0	1 [67]
[IF "NO"--stepmother?]............	0	1 [56]	0	1 [62]	0	1 [68]
(2) father? (i.e., natural/real)...........	0	1 [57]	0	1 [63]	0	1 [69]
[IF "NO"--stepfather?]...............	0	1 [58]	0	1 [64]	0	1 [70]
(3) grandparents?..............................	0	1 [59]	0	1 [65]	0	1 [71]
(4) other parent figures?	0	1 [60]	0	1 [66]	0	1 [72]
(specify) ____________________						

4. While you were growing up, how often did you usually go to church or religious services?

0. Never (or very seldom)	1. A few times a year	2. Once or twice a month	3. Every week (or more)	[73]

Starting with my next question, I will sometimes ask "HOW OFTEN" certain things happened to you. Use this card to help you decide on your answers.
[HAND "ANSWER CARD A" TO RESPONDENT]

[NOTE TO INTERVIEWER: QUESTIONS REQUIRING THE USE OF "ANSWER CARDS" ARE MARKED WITH A SUPERSCRIPT (NEXT TO THE QUESTION NUMBER) WHICH DESIGNATES WHICH CARD IS NEEDED.]

5^{a}. Tell me what your mother and father were like while you were growing up.
[OR IDENTIFY MAIN PARENTAL FIGURES FOR MOTHER AND FATHER]

How often would you say your (mother/father) --
[COMPLETE ALL ITEMS FOR "MOTHER", THEN "FATHER"]

USE "ANSWER CARD A" -- READ ITEMS, CIRCLE ANSWER	MOTHER (NATURAL/STEP)						FATHER (NATURAL/STEP)					
	NEVER . . . ALMOST ALWAYS					[01;03;ID]	NEVER . . . ALMOST ALWAYS					
a. worked on a job?	0	1	2	3	4	[13]	0	1	2	3	4	[25]
b. supported your family with money?	0	1	2	3	4	[14]	0	1	2	3	4	[26]
c. spent enough time with you?	0	1	2	3	4		0	1	2	3	4	
d. really loved you?	0	1	2	3	4	[16]	0	1	2	3	4	[28]
e. hit or spanked you too hard?	0	1	2	3	4		0	1	2	3	4	
f. warned you about drug or alcohol problems?	0	1	2	3	4	[18]	0	1	2	3	4	[30]
g. had arguments with you?.....	0	1	2	3	4		0	1	2	3	4	
h. drank alcohol?	0	1	2	3	4	[20]	0	1	2	3	4	[32]
i. used other drugs?	0	1	2	3	4		0	1	2	3	4	
j. did things against the law?..	0	1	2	3	4	[22]	0	1	2	3	4	[34]
k. spent time in jail or prison?	0	1	2	3	4		0	1	2	3	4	
l. was really a good parent?....	0	1	2	3	4	[24]	0	1	2	3	4	[36]

6. Besides you, how many other children were in your family? [DO NOT INCLUDE SELF].. |___|___|* [37-38]
# CHILDREN

*IF "1" OR MORE, ASK:

a. How many of them were your	older brothers?	|___|___|	[39-40]
[INCLUDE STEP- AND HALF-SIBLINGS]	older sisters?	|___|___|	[41-42]
	younger brothers?	|___|___|	[43-44]
	younger sisters?	|___|___|	[45-46]

7. Altogether, how many family relatives (that is, parents, brothers/sisters, grandparents, aunts/uncles) do you now stay in touch with by talking to or seeing regularly (such as every few months)? ....|___|___| [47-48]
NUMBER

8[a]. How often do you get money, food, shelter, or other help from your family or relatives?
[USE "ANSWER CARD A"]

0. Never 1. Rarely 2. Sometimes 3. Often 4. Almost always [49]

9. In the past 6 months, about how many hours each week did you usually spend in leisure or social activities with family -- like your parents, spouse, children, or other members of your family? ....|___|___|___| [50-52]
HOURS/WEEK

10[a]. What was it usually like when you DID spend time together with family members? Use this card and tell me how often you --

USE "ANSWER CARD A" -- READ ITEM AND CIRCLE ANSWER	NEVER	RARELY	SOME-TIMES	OFTEN	ALMOST ALWAYS	
a. got along together?	0	1	2	3	4	[53]
b. really enjoyed being together?	0	1	2	3	4	
c. drank beer or alcohol together?	0	1	2	3	4	[55]
d. talked openly about each other's interests and needs?	0	1	2	3	4	
e. helped each other with problems?	0	1	2	3	4	[57]
f. got blamed or fussed at about things you have done?	0	1	2	3	4	
g. had disagreements?	0	1	2	3	4	[59]
h. had loud arguments or fights?	0	1	2	3	4	
i. felt bored (nothing happening)?	0	1	2	3	4	[61]

11. In the last 6 months, how often did you go to church or religious services? Was it --

0. Never (or very seldom) 1. A few times 2. Once or twice a month 3. Every week (or more) [62]

12[a]. How often do you feel that religion is really important in your life? [USE "ANSWER CARD A"]

0. Never 1. Rarely 2. Sometimes 3. Often 4. Almost always [63]

PART C: PEER RELATIONS

Now I want to ask a few questions about your friends during the past 6 months.

1. About how many different friends do you have -- that is, people with whom you regularly hang out or spend your free time? .... |___|___|* [01;04;ID] [13-14]
   # FRIENDS

*IF "1" OR MORE, ASK

a. How many of them do you consider to be "close friends" -- that is, someone you can really depend on? .... |___|___|
   NUMBER

2. Do you wish that you had more friends than you have now? .... 0=No 1=Yes [17]

3ª. What are your friends (or associates) like?
Use the card and tell me, in general, do they --

USE "ANSWER CARD A" -- READ ITEM AND CIRCLE ANSWER	NEVER	RARELY	SOME-TIMES	OFTEN	ALMOST ALWAYS	
a. work regularly on a job?	0	1	2	3	4	[18]
b. seem positive or optimistic about life?	0	1	2	3	4	
c. get into arguments or fights?	0	1	2	3	4	
d. spend time with their families?	0	1	2	3	4	[21]
e. like being with their families?	0	1	2	3	4	
f. get high from too much alcohol?	0	1	2	3	4	
g. use other drugs?	0	1	2	3	4	[24]
h. trade, sell or deal drugs?	0	1	2	3	4	
i. do other things against the law?	0	1	2	3	4	
j. hang out with "gangs"?	0	1	2	3	4	[27]
k. go to jail (or prison)?	0	1	2	3	4	
l. go to treatment for drugs or alcohol?	0	1	2	3	4	[29]

4. On the average, about how many hours EACH WEEK do you spend just hanging out with your friends or buddies? .... |___|___|___| [30-32]
   [DO NOT INCLUDE TIME AT WORK/SCHOOL OR IN DRUG/CRIME RELATED ACTIVITIES]
   # HOURS

5ª. How often would you say that your friends (or associates) --

USE "ANSWER CARD A" -- READ ITEM AND CIRCLE ANSWER	NEVER	RARELY	SOME-TIMES	OFTEN	ALMOST ALWAYS	
a. look to you as a leader?	0	1	2	3	4	[33]
b. agree with your ideas?	0	1	2	3	4	
c. laugh at or make fun of you?	0	1	2	3	4	
d. ask for your advice about their problems?	0	1	2	3	4	[36]
e. cause trouble for you?	0	1	2	3	4	
f. take risks or chances?	0	1	2	3	4	
g. do things that can get them into trouble?	0	1	2	3	4	[39]
h. will encourage you to stay in this treatment program?	0	1	2	3	4	
i. will help you to "quit drugs"?	0	1	2	3	4	
j. really care about you?	0	1	2	3	4	[42]

6ª. In the past 6 months, how often did you have arguments or fights with your neighbors or co-workers? [USE ANSWER CARD A]

0. Never 1. Rarely 2. Sometimes 3. Often 4. Almost always [43]

7. What do you usually do in your leisure time?
For example, how many **HOURS EACH WEEK** do you usually spend --
[DO NOT INCLUDE TIME SPENT AT WORK/SCHOOL OR IN DRUG/CRIME RELATED ACTIVITIES]

READ ITEM AND RECORD ANSWER	# HOURS	
a. watching T.V. (or going to movies)?	|___|___|___|	[44-46]
b. shooting pool or playing cards/dominoes?	|___|___|___|	[47-49]
c. doing physical exercise (playing ball, jogging, swimming)?	|___|___|___|	[50-52]
d. doing hobbies (fishing, woodwork, handwork, crafts)?	|___|___|___|	[53-55]
e. reading or writing? [EXCLUDE SCHOOL STUDIES]	|___|___|___|	[56-58]
f. Anything else? (specify) ______________________	|___|___|___|	[59-61]

PART D. CRIMINAL HISTORY

The next question is about illegal activities in the last 30 days, including things for which you may or may not have been caught. Remember that what you tell me is private and confidential. Here is my question.

1. How much of your income or source of support in the past month came from some kind of illegal activities? Would you say --

   0. None 1. Some of it 2. Most of it 3. All of it [62]

2^c. Not counting your drug use, how many DAYS altogether out of the last 30 were you involved in any kind of activities that were against the law? Here is a list of the activities we are talking about.
[HAND "CRIME CARD" TO RESPONDENT AND REFER TO ITEMS 3-14 -- PROBE].......... |___|___|* [63-64]
# DAYS

*IF "1" OR MORE, ASK:

a^c. Which kinds of activities were you involved in? That is, how many different days (in the last 30) were you involved in each category of illegal activities listed on the card? [RECORD ANSWERS ON "CRIME CHART"]

3. How many TIMES in the last 30 days were you arrested? .... |___|___|___| [65-67]
["ARRESTED" MEANS TAKEN INTO CUSTODY OR TO POLICE STATION] # ARRESTS

4. What about in the past 6 months?
Altogether, how many TIMES were you arrested during that time? .... |___|___|___|* [68-70]
# ARRESTS

*IF "1" OR MORE, ASK:

a^c. And how many different TIMES (in the past 6 months) were you arrested for each of the reasons listed on this card? [RECORD ANSWERS ON "CRIME CHART"]

5. Now tell me about all of your past arrests, including times you did not go to jail.
Altogether, about how many TIMES during your life [01;05;ID]
have you ever been arrested or "taken in" by the police? .... |___|___|___|___|* [13-16]
# ARRESTS

*IF "1" OR MORE, ASK:

a. About how many of these arrests were for things you did while using drugs or trying to get drugs? .... |___|___|___|___| [17-20]
# ARRESTS

b. How old were you the first time you were arrested? .... |___|___|* [21-22]
AGE

c. *[IF "17" OR LESS, ASK:] And about how many times were you arrested before you turned 18? .... |___|___|___|___| [23-26]
# ARRESTS

d^c. Look at the card again and tell me how many times you were EVER ARRESTED for each of the reasons listed.
[RECORD ANSWERS ON "CRIME CHART"]

CRIME CHART

TYPE OF CRIMES	Q2a. DAYS OF ILLEGAL ACTIVITIES--LAST 30 DAYS	Q4a. TIMES ARRESTED--LAST 6 MONTHS	Q5d. TIMES ARRESTED--EVER (LIFETIME)
[1]. Drinking alcohol (DWI, public intoxication)?	DO NOT INCLUDE	☐☐ [51-52]	[01;06;ID] ☐☐ [13-14]
[2]. Use of other illegal drugs (possession of drug paraphernalia, public intoxication)?	DO NOT INCLUDE	☐☐	☐☐
[3]. Sale, distribution, or manufacturing of any drugs (not counting drug use or possession)?	☐☐ [27-28]	☐☐ [55-56]	☐☐ [17-18]
[4]. Forgery or fraud (writing bad checks, running con games)?	☐☐	☐☐	☐☐
[5]. Fencing or buying/receiving stolen property?	☐☐ [31-32]	☐☐ [59-60]	☐☐ [21-22]
[6]. Gambling, running numbers, or bookmaking?	☐☐	☐☐	☐☐
[7]. Prostitution or pimping?	☐☐ [35-36]	☐☐ [63-64]	☐☐ [25-26]
[8]. Burglary or auto theft?	☐☐	☐☐	☐☐
[9]. Other theft (larceny, shoplifting)?	☐☐ [39-40]	☐☐ [67-68]	☐☐ [29-30]
[10]. Robbery (armed robbery, mugging)?	☐☐	☐☐	☐☐
[11]. Violence against other persons (homicide, rape, aggravated assault, kidnapping, threatening with a weapon, etc.)?	☐☐ [43-44]	☐☐ [71-72]	☐☐ [33-34]
[12]. Arson or weapons offenses?	☐☐	☐☐	☐☐
[13]. Vandalism, vagrancy, loitering?	☐☐ [47-48]	☐☐ [75-76]	☐☐ [37-38]
[14]. Others not listed? (specify)____________	☐☐ [49-50]	☐☐ [77-78]	☐☐ [39-40]

PROBE FOR CLARITY AND CONSISTENCY OF ANSWERS!
ARE THE "TOTALS" IN Qs. 2, 4, & 5 ACCOUNTED FOR IN THE CRIME CHART??
[RECORD ALL REASONS OR CHARGES FOR EACH ARREST]

We are finished with that card, so I'll put it away. [TAKE BACK "CRIME CARD"]

6. In the past 6 months, how many TIMES have you been in jail or prison?
["IN JAIL OR PRISON" MEANS LOCKED BEHIND BARS
FOR ANY LENGTH OF TIME] .... |___|___|___|* [41-43]
# TIMES

*IF "1" OR MORE, ASK:

a. What about the last 30 days? That is, on how many DAYS
out of the last 30 did you spend time in jail or prison? .... |___|___| [44-45]
# DAYS

b. Altogether, on how many DAYS did you spend time
in jail or prison in the past 6 months? .... |___|___|___| [46-48]
# DAYS

7. How many different TIMES during your whole life
have you ever been in jail, prison, or juvenile lockup? .... |___|___|___|* [49-51]
# TIMES

*IF "0", SKIP TO #8

*IF "1" OR MORE, ASK:

a. How old were you the first time you were
in jail, prison, or juvenile lock-up? .... |___|___| [52-53]
AGE

b. Altogether, how much time have you
ever spent in jail, prison, or juvenile lock-up? ....MONTHS |___|___|___| [54-56]

WEEKS |___|___|___| [57-59]

DAYS |___|___|___| [60-62]

*8. What is your current legal status? [CIRCLE ANSWER]

0. None *1. On probation? *2. On parole? 3. Awaiting charge, trial, or sentence?

4. Other (specify) ______________________________ [63]

*IF "1" OR "2", ASK:

a. When does your current (parole/probation) end? .... |___|___||___|___|
MONTH YEAR

[64-67]

PART E: HEALTH AND PSYCHOLOGICAL STATUS

1. How many times in your life have you ever been hospitalized for health or medical problems, like a serious illness or injury? [INCLUDE O.D.'S AND D.T.'S, BUT NOT DETOX; EXCLUDE HOSPITAL STAYS FOR CHILDBIRTH] .... |___|___|* [68-69]
# TIMES

*IF "1" OR MORE, ASK:

a. How many times have you been hospitalized in the last 6 months? .... |___|___|

2. Do you currently have any serious health problems? .... 0=No 1=Yes* [72]

b. *[IF "YES", ASK] What are the main problems you have? [RECORD VERBATIM]

|___|___| [73-74]

3. How many times in your life have you ever been treated for psychological or emotional problems? [INCLUDING EITHER INPATIENT OR OUTPATIENT TREATMENT; DO NOT INCLUDE ALCOHOL OR DRUG TREATMENTS] .... |___|___|* [01;07;ID] [13-14]
# TIMES

*IF "1" OR MORE, ASK:

a. How many times have you been treated for these problems in the last 6 months? .... |___|___|

4. As far as you know, was either of your parents ever treated for psychological or emotional problems? ....

MOTHER: 0=No 1=Yes 7=? [17]
FATHER: 0=No 1=Yes 7=? [18]

5. Not counting the effects from drug use, have you ever experienced --

	No	Yes	
a. serious depression?	0	1	[19]
b. serious anxiety or tension?	0	1	
c. hallucinations (hearing or seeing things that others thought were imaginary)?	0	1	[21]
d. trouble understanding, concentrating, or remembering?	0	1	
e. trouble controlling violent behavior?	0	1	[23]
f. serious thoughts of suicide?	0	1	
g. attempts at suicide?	0	1	[25]

6. In the last 6 months, have you taken prescribed medication for any psychological or emotional problems? .... 0=No 1=Yes [26]

IF "FEMALE", ASK:

7. Are you currently pregnant? .... 0=No 1=Yes 7=?

8. Altogether, how many times have you ever had a miscarriage, still birth, or child born with congenital problems? .... |___|
# TIMES

[28]

PART F: DROG HISTORY

1. Have you ever been a cigarette smoker?..0=No 1=Yes* [29]

*IF "YES", ASK:

a. How old were you when you first started smoking?.................................|__|__| [30-31]
AGE

b. About how many cigarettes do you currently smoke each day?................|__|__|* [32-33]
NUMBER

c. *[IF "0", ASK] How long ago did you quit? [RECORD MONTHS]........|__|__|__| [34-36]
# MONTHS

[HAND "DRUG CARD" TO RESPONDENT]

2. Look over this list and tell me which drugs are presently causing you the most serious problems? Which drug is -- [USE CODE NUMBERS FROM "DRUG HISTORY CHART"]

a. First most serious..|__|__| [37-38]

b. Second most serious..|__|__| [39-40]

c. Third most serious..|__|__| [41-42]

3[d]. For each drug listed on the card that you have EVER USED, tell me how old you were the first time you ever tried it (i.e., of your own choice). [RECORD AGE AT FIRST USE IN "DRUG HISTORY CHART", AND WRITE "0" FOR THOSE DRUGS NEVER USED]

[TAKE BACK "DRUG CARD" -- HAND "ANSWER CARD B" TO RESPONDENT]

FOR EACH SEPARATE DRUG EVER USED, ASK:

a[b]. Using answers from this card, tell me how often in the last 30 days you have used (drug name)? [RECORD RESPONSE IN "DRUG HISTORY CHART"; DO NOT USE RESPONSE CODE "1" FOR THIS MONTHLY ITEM BECAUSE IT OVERLAPS WITH CODES 2 & 3]

b[b]. In the last 6 months, how often have you used (drug name)? [RECORD RESPONSE IN "DRUG HISTORY CHART"]

[FOR DRUGS EVER USED THAT CAN BE INJECTED (SEE CHART), ASK]

c. Have you ever used the following drugs by injection with a needle? What about -- [CIRCLE ANSWER IN "DRUG HISTORY CHART"]

d. *[IF "YES", ASK] How old were you the first time you injected (drug names) with a needle? [RECORD AGE IN "DRUG HISTORY CHART"]

DRUG HISTORY CHART

TYPE OF DRUGS	Q3. AGE 1ST USED	Q3a. LAST 30 DAYS	Q3b. LAST 6 MONTHS	Q3c. EVER IVDU	Q3d. AGE 1ST IVDU
(1) Alcohol..........................	|__|__| [43-44]	[01;08;ID] |__| [13]	|__| [29]		
(2) Inhalants (glue, spray paint, toluene, liquid paper, etc.)	|__|__|	|__|	|__|		
(3) Marijuana/Hashish	|__|__| [47-48]	|__| [15]	|__| [31]		
(4) Hallucinogens/LSD/ Psychedelics/PCP/ mushrooms/peyote	|__|__|	|__|	|__|		
(5) Crack/Freebase..............	|__|__|	|__|	|__|	NO YES	
(6) Cocaine (by itself).........	|__|__| [53-54]	|__| [18]	|__| [34]	0 1 [45]	|__|__| [56-57]
(7) Heroin and Cocaine (mixed together)...........	|__|__|	|__|	|__|	0 1	|__|__|
(8) Heroin (by itself)	|__|__| [57-58]	|__| [20]	|__| [36]	0 1 [47]	|__|__| [60-61]
(9) Street Methadone (non-prescription).........	|__|__|	|__|	|__|	0 1	|__|__|
(10) Other Opiates/Opium Morphine/Demerol......	|__|__| [61-62]	|__| [22]	|__| [38]	0 1 [49]	|__|__| [64-65]
(11) Methamphetamine/ Speed/Ice.....................	|__|__|	|__|	|__|	0 1	|__|__|
(12) Other Amphetamines/ Uppers/Diet Pills.........	|__|__| [65-66]	|__| [24]	|__| [40]	0 1 [51]	|__|__| [68-69]
(13) Librium/Valium/ Minor Tranquilizers.....	|__|__|	|__|	|__|	0 1	|__|__|
(14) Barbiturates..................	|__|__| [69-70]	|__| [26]	|__| [42]	0 1 [53]	|__|__| [72-73]
(15) Other Sedatives/ Hypnotics/Quaaludes...	|__|__|	|__|	|__|	0 1	|__|__|
(16) Other (specify) ____________________	|__|__| [73-74]	|__| [28]	|__| [44]	0 1 [55]	|__|__| [76-77]

FREQUENCY OF USE CODES:

0. Never/Not used
1. Only 1-3 times
2. About 1 time per month
3. About 2-3 times per month
4. About 1 time per week
5. About 2-6 times per week
6. About 1 time per day
7. About 2-3 times per day
8. About 4 or more times per day

PROBE FOR CLARITY AND CONSISTENCY OF ANSWERS!

4. Tell me about your alcohol use in the past month. Altogether, on how many of the last 30 days did you drink any beer, wine, wine coolers, or hard liquor (such as whiskey, rum, vodka, gin, etc.)? [01;09;ID] |___|___|* [13-14] # DAYS

*IF ANY, ASK:

a. On how many of the last 30 days did you drink any beer?........................|___|___|* [15-16] # DAYS

(1) *IF ANY, ASK:
About how many cans or bottles of beer did you generally drink on each of those days?
[RECORD VERBATIM, PROBE FOR SIZE OF CAN OR BOTTLE]

|___|___| 12-OZ CANS

b. On how many days did you drink any wine (or wine coolers)?.................|___|___|* [19-20] # DAYS

(1) *IF ANY, ASK:
About how much wine did you generally drink on each of those days? [PROBE FOR AMOUNT AND TYPE. INDICATE WHETHER WINE OR WINE COOLER]

|___|___| OUNCES OF WINE

c. On how many days did you drink any hard liquor, such as whiskey, rum, vodka, gin, etc.?..|___|___|* [23-24] # DAYS

(1) *IF ANY, ASK:
About how many drinks (or bottles) of hard liquor did you generally drink on each of those days?
[USUALLY A "DRINK" IS 1.5 OZ. OF LIQUOR; RECORD VERBATIM, PROBE FOR AMOUNT AND TYPE OR PROOF OF LIQUOR]

|___|___| OUNCES OF LIQUOR

d. What about your pattern of drinking? On how many days (out of the last 30) did you have a drink as soon as you woke up in the morning -- before eating or going to work/school?..|___|___| [27-28] # DAYS

e. On how many days did you have any shakes or tremors because you needed a drink?..|___|___| [29-30] # DAYS

f. On how many days did you drink more alcohol than you really intended or wanted to?..|___|___| [31-32] # DAYS

g. On how many days last month did you ever have 3 or more drinks within a 1-hour period? (A "drink" is equal to a 12-oz. bottle of beer, a mixed drink, a "shot" glass (1.5 oz.) of hard liquor, or a glass of wine.)..|___|___| [33-34] # DAYS

5ª. Think about the past 6 months and tell me how often your use of alcohol or other drugs caused any problems for you. First, let's talk about alcohol, and then other drugs.

Use this card and tell me how often you think (alcohol/other drugs) led to problems in each of the following areas of your life.

USE "ANSWER CARD A" --	ALCOHOL USE						OTHER DRUG USE					
READ ITEMS, CIRCLE ANSWER	NEVER . . . ALMOST ALWAYS						NEVER . . . ALMOST ALWAYS					
How often has your use of (alcohol/drugs) affected --												
a. your medical or physical health?	0	1	2	3	4	[35]	0	1	2	3	4	[43]
b. your relations with family or friends?	0	1	2	3	4		0	1	2	3	4	
c. your general attitude or emotional health?............	0	1	2	3	4		0	1	2	3	4	
d. your attention and concentration?	0	1	2	3	4	[38]	0	1	2	3	4	[46]
e. going to work or finding a job?......................	0	1	2	3	4		0	1	2	3	4	
f. money and finances?...........	0	1	2	3	4		0	1	2	3	4	
g. fights or arguments?	0	1	2	3	4		0	1	2	3	4	
h. police or legal trouble?........	0	1	2	3	4	[42]	0	1	2	3	4	[50]

6. Was either of your parents ever treated for drinking or alcohol problems? ....MOTHER: 0=No 1=Yes 7=? [51]
FATHER: 0=No 1=Yes 7=? [52]

7. Was either of your parents ever treated for other drug use problems? ....MOTHER: 0=No 1=Yes 7=? [53]
FATHER: 0=No 1=Yes 7=? [54]

8. How many times have **YOU** ever overdosed on drugs? ....|___|___| [55-56]
# TIMES

*IF "1" OR MORE, ASK:

a. How long has it been since the last time?..|___|___|___|
# MONTHS

b. How many times have you ever intentionally overdosed on drugs? ....|___|___|
# TIMES

[60-61]

9[a]. What do you think are some of the MAIN REASONS you use drugs -- especially during the last 6 months. You can use this card again for your answers.

USE "ANSWER CARD A" -- READ ITEMS, CIRCLE ANSWER	NEVER	RARELY	SOME-TIMES	OFTEN	ALMOST ALWAYS	
How often do you use drugs because you feel --						
a. sick with physical pain?............................ [OTHER THAN WITHDRAWAL]	0	1	2	3	4	[62]
b. bored or lonely?.......................................	0	1	2	3	4	
c. sad or depressed?.....................................	0	1	2	3	4	
d. mad or angry?...	0	1	2	3	4	[65]
e. scared or afraid?.......................................	0	1	2	3	4	
f. happy or excited?......................................	0	1	2	3	4	[67]
How often do you use drugs to help you --						
g. increase energy or alertness?.....................	0	1	2	3	4	[68]
h. find new excitement?...............................	0	1	2	3	4	
i. increase social confidence and courage?...	0	1	2	3	4	
j. act like other people you know?..............	0	1	2	3	4	[71]
k. have fun and party with friends?............	0	1	2	3	4	
l. forget or escape problems?.......................	0	1	2	3	4	
m. relax from pressures or stress?.................	0	1	2	3	4	[74]
How often is your drug use caused by --						
n. just being in certain places or situations that make you want them?........	0	1	2	3	4	[75]
o. pressures from others to use them?..........	0	1	2	3	4	
p. having problems you can't solve?	0	1	2	3	4	[77]
q. drugs being so easy to get?.......................	0	1	2	3	4	
r. your need to feel high?............................	0	1	2	3	4	[79]

[01;10;ID]

10. Are there other important reasons besides these that you use drugs?........ 0=No 1=Yes* [13]

*IF "YES", ASK

a. What are they? [RECORD VERBATIM IF DIFFERENT FROM ABOVE]

|___|___|___|___|___|___| [14-19]

11. How many TIMES have you ever been treated for your drinking or alcohol problems? ....|___|___| [20-21]
# TIMES

12. How many TIMES before now have you ever been in a treatment program for your illegal use of drugs? [INCLUDE ABUSE OF PRESCRIPTION DRUGS]..........|___|___|* [22-23]
# TIMES

*IF "0", SKIP TO #16

*IF "1" OR MORE, ASK:

a. What kinds of treatment? How many times have you been in --
[RECORD ANSWERS IN "DRUG TREATMENT CHART"]

DRUG TREATMENT CHART

READ EACH ITEM, RECORD ANSWER	Q12a. TIMES ADMITTED	Q12b. MONTHS TREATED	Q12c. NO	YES	
(1) Inpatient treatment (in a hospital setting)?.................	|___|___|[24-25]	|___|___|___| [36-38]	0	1	[54]
(2) Residential/therapeutic community?................................	|___|___|[26-27]	|___|___|___| [39-41]	0	1	[55]
(3) Other institutional treatment (such as VA or state hospital or in-prison program)?................	|___|___|[28-29]	|___|___|___| [42-44]	0	1	[56]
(4) Outpatient drug-free?	|___|___|[30-31]	|___|___|___| [45-47]	0	1	[57]
(5) Outpatient methadone?	|___|___|[32-33]	|___|___|___| [48-50]	0	1	[58]
(6) Other? (specify)_______________	|___|___|[34-35]	|___|___|___| [51-53]	0	1	[59]

[ASK b & c ONLY FOR TREATMENTS WITH "1" OR MORE ADMISSIONS]

b. Altogether, how many months have you been treated in each type?
[RECORD TOTAL MONTHS TREATED IN "DRUG TREATMENT CHART"]

c. Were any of these programs ever effective in helping you quit drugs for 3 months or longer? [CIRCLE ANSWERS IN "DRUG TREATMENT CHART"]

13. How long has it been since the last time you were in treatment for illegal use of drugs? How many months?.. |___|___|___| [60-62]
MONTHS

14. And which treatment program was that?
[RECORD CATEGORY NUMBER FROM "TREATMENT CHART" TO INDICATE TYPE OF LAST TREATMENT, AND WRITE VERBATIM THE NAME AND LOCATION OF LAST TREATMENT]..... |___| [63]
TYPE

NAME AND LOCATION OF LAST TREATMENT:

15. How many other times have you ever been admitted to this treatment agency before now?.. |___|___| [64-65]
# TIMES

*16. Who referred you here for treatment (this time)?
[USE CODES BELOW].. |___|

1. Self
2. Family or friend
3. Drug treatment provider or outreach
4. Physician or health care provider
5. School or educational counselor
6. Employer (EAP)
7. Court or criminal justice officer
8. Other (specify) __________

17. Would you rather be in methadone treatment or drug free treatment, or do you have no preference? [CIRCLE ANSWER]

1. Methadone treatment 2. Drug free 3. No preference [67]

18. Have you ever gone to self-help meetings like AA, NA, CA, etc.?.........0=No 1=Yes* [68]

*IF "YES", ASK:

a. Did you attend any self-help group meetings in the last 30 days?....0=No 1=Yes

b. About how many meetings have you ever attended? Was it --

1. 1-5 2. 6-10 3. 11-25 4. 26-100 5. Over 100

c. Over how many months did you attend these meetings?........................ |___|___|___|
MONTHS

d^{a}. How often do you find these meetings to be helpful? [REFER TO "ANSWER CARD A"]

0. Never 1. Rarely 2. Sometimes 3. Often 4. Almost Always

[74]

19. If the following people knew, do you think they would encourage you to finish this treatment and get off drugs? What about your --
[CHILDREN UNDER 10 ARE CODED "8"]

READ ITEMS AND CIRCLE ANSWER	NO	YES	DON'T KNOW	NOT APPLICABLE	
					[01;11;ID]
a. mate/spouse/boyfriend or girlfriend?	0	1	7	8	[13]
b. children?	0	1	7	8	
c. parents/mother/father?	0	1	7	8	[15]
d. brothers/sisters?	0	1	7	8	
e. other close relatives?	0	1	7	8	
f. friends?	0	1	7	8	[18]

20. What are your real expectations about your future drug use?
Which of these statements best describes what you think will happen?
You will -- [READ AND SHOW THIS LIST TO RESPONDENT, CIRCLE ANSWER]

1. continue to use drugs like before.
2. switch to using more alcohol or other less serious drugs.
3. cut back your drug use, but use on an occasional or more controlled basis.
4. quit for awhile, but start using again later.
5. quit, but slip a few times during recovery.
6. quit forever, and never use again.
7. [Other - specify] ____________________ [19]

21. Based on what you know about yourself and your situation, how good are the chances that you can get off and stay off of drugs? Are they .... |___| [20]

1. Very poor 2. Moderately poor 3. Uncertain 4. Moderately good 5. Very good

22. Do you have any type of medical insurance that can help pay the cost of your treatment? .... 0=No 1=Yes* [21]

*IF YES, ASK:

a. What kind of insurance do you have? [RECORD VERBATIM]

|__|__|

[22-23]

PART G: AIDS RISK ASSESSMENT

In this last set of questions, I need to get some more information about your drug use and sexual activities that could have exposed you to the AIDS virus. A few questions are highly personal, but it is very important that you be open and honest in your answers.

1. Altogether in the last 30 days, how many TIMES have you used needles to shoot drugs?
[PROBE FOR TIMES WHEN SHOT UP MORE THAN ONCE A DAY]..|___|___|___|*[24-26]
# TIMES

*IF "1" OR MORE, ASK

a. How many of those TIMES did you use a set of "works" -- needle, cooker, cotton -- that was USED ONLY BY YOU?........................|___|___|___|
# TIMES

[27-29]

2[b]. Now think about the last 6 months, and use this card to answer.
[HAND "ANSWER CARD B" TO RESPONDENT]

a[b]. How often during those months did you usually shoot up any kind of drugs with needles?..|___|* [30]
CARD B

***IF "0", SKIP TO #4**

b[b]. And how often did you usually shoot up with a set of "works" (needle, cooker, cotton) that was USED ONLY BY YOU?
[ANSWER SHOULD NOT BE GREATER THAN FOR "2a"]..|___| [31]
CARD B

3[b]. How often in the last 6 months did you ever shoot up with a set of "works" that were "dirty"? [PROBE -- This means a needle, cooker, or cotton that someone else had used earlier and was not cleaned with bleach or Clorox before you used it] [USE "ANSWER CARD B"]..|___|* [32]
CARD B

*IF "1" OR MORE, ASK:

a. Altogether, about how many PEOPLE have you shared with (in the past 6 months)? [PROBE -- This means all the people who used the same needles, cookers, or cotton without being cleaned in bleach before you used them]..|___|___|___| [33-35]
# PEOPLE

b. How many of THESE PEOPLE would you say probably also shared (needles, cookers, or cotton) with someone else besides you?................|___|___|___| [36-38]
# PEOPLE

c[b]. Look at the card again and think about the last 6 months. How often have you used a dirty needle or "works" after it was used by --
[USE "ANSWER CARD B"]

(1) someone you didn't know very well?...|___| [39]

(2) people (male or female) who trade sex for money, drugs, or gifts?.........|___| [40]
CARD B

*4. What about sex in the last 30 days? How many **PEOPLE** did you have any kind of sex with last month?....................|___|___|___|* [41-43]
# PEOPLE

*IF "1" OR MORE, ASK:

a. How many of your partners were female and how many were male?.................... Female: |___|___|___| [44-46]

Male: |___|___|___| [47-49]
# PEOPLE

b. Altogether, how many **TIMES** did you have sex in the last 30 days? [DO NOT INCLUDE MASTURBATION]....................|___|___|___| [50-52]
# TIMES

c. And how many **TIMES** did you trade sex for money, drugs, or gifts?....................|___|___|___| [53-55]
# TIMES

Now let's talk about when you had **SEX WITHOUT CONDOMS.**

d. How many **TIMES** did you have sex in the last 30 days without using a latex condom/rubber? [ANSWER NOT GREATER THAN FOR "4b"]........|___|___|___| [56-58]
# TIMES

e. And how many **PEOPLE** did you have sex with in the last 30 days without using a latex condom/rubber?....................|___|___|___| [59-61]
# PEOPLE

5. What about the last 6 months? Altogether, how many **PEOPLE** have you had vaginal, anal, or oral sex with in the last 6 months?............|___|___|___|___|* [62-65]
# PEOPLE

*IF "1" OR MORE, ASK:

a. How many of your partners were female and how many were male?.................... Female: |___|___|___|___| [01;12;ID] [13-16]

Male: |___|___|___|___| [17-20]
# PEOPLE

b[b]. Using this card [ANSWER CARD B], tell me how often you usually had any kind of sex during the last 6 months. ....|___| [21]
CARD B

Now let's talk about when you had **SEX WITHOUT CONDOMS.**

c. Altogether, how many **PEOPLE** did you have sex with in the past 6 months without using a latex condom/rubber? ....|___|___|___|___| [22-25]
# PEOPLE

d[b]. Look at Card B again and tell me how often you usually had sex (in the last 6 months) without using a latex condom/rubber? ....|___| [26]
CARD B

How often was it -- [FREQUENCIES SHOULD NOT BE GREATER THAN IN "5d"]

(1) with someone who is not your mate/spouse?....................|___| [27]

(2) with someone who shoots drugs with needles?....................|___|

(3) while you or your partner were "high" on drugs or alcohol? ....|___| [29]

(4) while trading (giving or getting) sex for money, drugs, or gifts? ....|___|

(5) involving vaginal sex (penis to vagina)?....................|___| [31]

(6) involving oral sex (mouth to penis/vagina)?....................|___|

(7) involving anal sex (penis to anus)?....................|___| [33]
CARD B

6. How many PEOPLE do you know personally who have AIDS or have died of AIDS? .... |___|___|___|* [34-36]
# PEOPLE

*IF "1" OR MORE, ASK:

a. How many of them ever shared a needle with you? .... |___|___|___| [37-39]

b. How many of them ever had sex with you? .... |___|___|___| [40-42]
# PEOPLE

7a. Some people look for ways to reduce their chances of getting AIDS, but others seem unconcerned. Use this other card [ANSWER CARD A] and tell me how often in the past 6 months you have --

USE "ANSWER CARD A" -- READ ITEMS AND CIRCLE ANSWER	NEVER	RARELY	SOME-TIMES	OFTEN	ALMOST ALWAYS	
a. thought about being exposed to the AIDS virus?	0	1	2	3	4	[43]
b. thought that you really could get AIDS?	0	1	2	3	4	
c. thought about ways to avoid being exposed?	0	1	2	3	4	[45]
d. thought about cleaning your needles and other works with bleach?	0	1	2	3	4	
e. refused to share needles with someone else?	0	1	2	3	4	[47]
f. had concerns about who you had sex with?	0	1	2	3	4	
g. thought about using condoms during sex?	0	1	2	3	4	[49]
h. worried about getting AIDS from someone else?	0	1	2	3	4	
i. worried about giving AIDS to someone else?	0	1	2	3	4	[51]

END OF THIS INTERVIEW--THANKS!!

PART H: INTERVIEWER COMMENTS:

[TO BE COMPLETED AFTER THE INTERVIEW]

1. **Time When Finished Interview:** .... |__|__|:|__|__|
   [USE MILITARY TIME] HR MIN
   [52-55]

2. **Number of Sessions:**.................................|__|
   [56]

3. **Total Length of Interview:** ....|__|__|__|
   MINUTES
   [57-59]

4. **Place of Interview:**
   [CIRCLE ANSWER]

   Counselor's office..1
   Intake office...2
   Other private office..3
   Hallway..4
   Off-site (specify)..5
   Other (specify)...6

   ______________________________ [60]

5. **Office Conditions:**
   [CIRCLE ANSWER]

	NONE	SOME	A LOT	
Privacy?................................	0	1	2	[61]
Physically comfortable?.........	0	1	2	
Telephone interruption(s)?....	0	1	2	
Other interruption(s)?...........	0	1	2	[64]

DESCRIBE THE RESPONDENT:

[CIRCLE ANSWERS]

6. **Weight:**
   Emaciated..1
   Thin..2
   Average..3
   Obese...4
   [65]

7. **Attention to Interviewer:**
   Poor...1
   Acceptable..2
   Good..3
   Excellent..4
   [66]

8. **Understanding of Questions:**
   Poor...1
   Acceptable..2
   Good..3
   Excellent..4
   [67]

9. **Ability to Articulate Answers:**
   Poor...1
   Acceptable..2
   Good..3
   Excellent..4
   [68]

10. **Openness and Honesty:**
    Poor...1
    Acceptable..2
    Good..3
    Excellent..4
    [69]

11. **Cooperativeness:**
    Cooperative.......................................1
    Suspicious..2
    Hostile..3
    Uncommunicative..............................4
    [70]

12. **Any Signs of Client --**

	NONE	SOME	A LOT	
Denial?........................	0	1	2	[71]
Drunkenness?..............	0	1	2	
Drug intoxication?......	0	1	2	[73]
Poor concentration?....	0	1	2	
Depression?................	0	1	2	[75]
Overly anxious?..........	0	1	2	
Thought disorders?.....	0	1	2	[77]

Name of Interviewer______________________________

|__|__|
I.D. NO.

[78-79]

Group Assignment?............................1=Standard
2=Mapping

[80]

COMPLETE "ASSESSMENT PROFILE" ON NEXT PAGE!

PART I: CLIENT ASSESSMENT PROFILE

INSTRUCTIONS: This page should be completed for each client immediately after the intake process and reflects the interviewer's clinical assessments. The counselor who conducts the Intake Form interview should complete the ratings below, with later review and revision (if needed) based on staff review of new clients. The ratings should indicate global severity of problems which need to be addressed through treatment (either at this agency or through referral). The rating scale ranges from "0" (no treatment necessary) to "9" (treatment needed for life-threatening situation). Intermediate ratings of "4" or "5" identify symptoms of moderate intensity that need attention in treatment after critical needs are addressed. [REFERENCE ITEMS FOR EACH PROBLEM-AREA RATING ARE IDENTIFIED IN PARENTHESES]

	Ratings of Problems Needing Treatment/Counseling										
PROBLEM AREAS [CIRCLE ANSWER]	NONE				MODERATE				SEVERE		
											[01;13;ID]
Employment/Support (A:11,12,15).....	0	1	2	3	4	5	6	7	8	9	[13]
Family Relations (A:3-10; B:7-10)......	0	1	2	3	4	5	6	7	8	9	[14]
Peer Relations (C:1-7)......................	0	1	2	3	4	5	6	7	8	9	
Legal/Criminality (D:1-4,6,8)...........	0	1	2	3	4	5	6	7	8	9	[16]
Medical/Health (E:1,2).....................	0	1	2	3	4	5	6	7	8	9	
Psychological/Emotional (E:3,5,6).....	0	1	2	3	4	5	6	7	8	9	[18]
Alcohol Use (F:2-5,11)......................	0	1	2	3	4	5	6	7	8	9	
All Other Drug Use (F:2,3,5,8,12)......	0	1	2	3	4	5	6	7	8	9	[20]
Heroin/Other Opiates................	0	1	2	3	4	5	6	7	8	9	
Cocaine/Speed/Amphetamines..	0	1	2	3	4	5	6	7	8	9	[22]
Speedball (Heroin+Coc/Speed)...	0	1	2	3	4	5	6	7	8	9	
Crack/Ice (smoked)....................	0	1	2	3	4	5	6	7	8	9	[24]
Marijuana..................................	0	1	2	3	4	5	6	7	8	9	
Other Drug (____________)......	0	1	2	3	4	5	6	7	8	9	[26]
AIDS-Risky Needle Use (G:1-3)......	0	1	2	3	4	5	6	7	8	9	
AIDS-Risky Sex (G:4,5)....................	0	1	2	3	4	5	6	7	8	9	[28]

SUMMARY COMMENTS:

ANSWER CARD A

[0]. NEVER

[1]. RARELY

[2]. SOMETIMES

[3]. OFTEN

[4]. ALMOST ALWAYS

ANSWER CARD B

NONE OR
INFREQUENT
USE ....[0]. Never/Not Used
[1]. Only 1-3 times

MONTHLY
USE ....[2]. About 1 time per month
[3]. About 2-3 times per month

WEEKLY
USE ....[4]. About 1 time per week
[5]. About 2-6 times per week

DAILY
USE ....[6]. About 1 time per day
[7]. About 2-3 times per day
[8]. About 4 or more times per day

DRUG CARD

[1]. Alcohol

[2]. Inhalants (glue, spray paint, toluene, liquid paper)

[3]. Marijuana/Hashish

[4]. Hallucinogens/LSD/Psychedelics/PCP

[5]. Crack/Freebase

[6]. Cocaine (by itself)

[7]. Heroin and Cocaine (mixed together)

[8]. Heroin (by itself)

[9]. Street Methadone (non-prescription)

[10]. Other Opiates/Opium/Morphine/Demerol

[11]. Methamphetamine/Speed/Ice

[12]. Other Amphetamines/Uppers/Diet Pills

[13]. Librium/Valium/Minor Tranquilizers

[14]. Barbiturates

[15]. Other Sedatives/Hypnotics/Quaaludes

[16]. Anything else?

CRIME CARD

[1]. Drinking alcohol (DWI, public intoxication)

[2]. Use of other illegal drugs (possession of drug paraphernalia, public intoxication)

[3]. Sale, distribution, or manufacturing of any drugs (not counting drug use or possession)

[4]. Forgery or fraud (writing bad checks, running con games)

[5]. Fencing or buying/receiving stolen property

[6]. Gambling, running numbers, or bookmaking

[7]. Prostitution or pimping

[8]. Burglary or auto theft

[9]. Other theft (larceny, shoplifting)

[10]. Robbery (armed robbery, mugging)

[11]. Violence against other persons (homicide, rape, aggravated assault, kidnapping, threatening with a weapon, etc.)

[12]. Arson or weapons offenses

[13]. Vandalism, vagrancy, loitering

[14]. Others not listed

DATAR (3/91)

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